

County Borough

of Blackburn.



ANNUAL REPORT

UPON THE

Health of Blackburn

For the Year 1919

BY

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OF THE INFECTIOUS DISEASES HOSPITALS, CHIEF
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OFFICER.

BLACKBURN:

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INDEX.

Page.

SECTION I.

VITAL STATISTICS	5 to 15
Population	5
Marriages	5 & 6
Births	6 to 8
Illegitimate Births	7
Stillbirths	8
Deaths	8 to 15
Infantile Mortality	11 to 15

SECTION II.

Maternity and Child Welfare Work ...	17 to 20
Supervision of Midwives	20 to 22

SECTION III.

INFECTIOUS DISEASES	25 to 43
Smallpox and Vaccination	27
Scarlet Fever	27

	Page.
Diphtheria	27 & 28
Enteric Fever	28
Puerperal Fever	29
Measles	29
Whooping Cough	29
Tuberculosis	30 to 35
Infantile Diarrhoea	36
Cancer	36
Venereal Diseases	36 to 38
Influenza	39
Disinfection	39
Cleansing Station	39
Fever Hospital	39 to 43
Fever Hospital Bacteriological Laboratory	43

SECTION IV.

FACTORIES AND WORKSHOPS	44 to 51
-------------------------------	----------

SECTION V.

FOOD SUPPLY	52 to 69
Sale of Food and Drugs Acts	52 to 57
Milk Supply	58

	Page.
Meat Inspection	59 to 66
Contagious Diseases of Animals Act ...	66 to 69

SECTION VI.

GENERAL SANITARY WORK	70 to 80
House Drainage	70 to 72
Scavenging	72 to 74
Housing and Town Planning Act	74 & 75
Houses Let-in-Lodgings	75
Common Lodging-Houses	75 & 76
Canal Boats Acts	76 & 77
Offensive Trades	77
Nuisances	77
Smoke Observations	80

SECTION VII.

Meteorological Observations	81 to 83
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APPENDIX (Local Government Board Tables).

TABLE I.—Vital Statistics of the whole Borough during 1919 and previous Years.

,, II.—Cases of Infectious Disease notified during 1919.

,, III.—Causes of and Ages at Death during 1919.

,, IV.—Deaths under 1 Year of Age during 1919.



Statistical Summary for 1919.

Area of the Borough	7,418 acres.
Population at Census, 1911	133,052
Estimated total Population, 1919	131,246
Estimated Civil* Population, 1919	125,992
Birth-Rate per 1,000 living, calculated on total Population for 1919	14.0
Death-Rate per 1,000 living, calculated on the Civil Population for 1919	15.9
Infant Mortality per 1,000 Births	94.6
Total Occupied Houses at 1911 Census	30,648

*Not including members of His Majesty's Forces.



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Staff of the Health Department.

Medical Officer of Health, School Medical Officer and Chief Executive Tuberculosis Officer.

J. COOTE HIBBERT, M.D. (Lond.), D.P.H.

Assistant Medical Officer of Health and Tuberculosis Officer.

A. J. EWING, M.A., M.B., Ch.B., D.P.H.

School Medical Inspector and Assistant to Medical Officer of Health.

J. ROBERTSON, M.B., C.M., D.P.H.

Maternity Officer (Assistant Medical Officer of Health).

E. H. WALKER, M.B., Ch.B. Resigned August, 1919.

Veterinary Inspector and Chief Meat Inspector.

E. J. BURNDRED, M.R.C.V.S., D.V.H.

Assistant Meat Inspector.

*W. H. GOODMAN.

Chief Sanitary Inspector.

*JAMES GRAHAM.

Special Inspector for Food and Drugs, &c.

*O. H. WILLIAMS.

Special Inspector for Factories and Workshops.

*H. KENYON.

Special Inspector for Drainage Work.

*A. LEES.

District Inspectors.

*J. W. MARGINSON. *W. WALNE. *ERNEST SEFTON.
*H. W. FOWLER. *E. SHUTTLEWORTH.

Lady Health Visitors.

*Miss ST. STEPHENS. *Miss LOWE. *Miss LANGLEY. *Miss MARTIN.
*Miss STANANOUGHT. *Mrs. JONES.

Lady Inspectors of Midwives.

*Miss ST. STEPHENS. *Miss LOWE.

School Nurses.

*Miss BARTON. *Miss EVANS.

Chief Clerk.

THOMAS FOWLER.

Clerks.

H. PEMBERTON. T. PICKERING. J. HARGREAVES.
J. R. MARSDEN.

Disinfectors.

J. W. JOHNSON. E. HODGSON. F. HOLDEN.

*Holders of the Royal Sanitary Institute Certificates.

PUBLIC HEALTH OFFICE,

BLACKBURN,

June, 1920.

*To the Chairman and Members of the Health Committee
of the County Borough of Blackburn.*

MR. CHAIRMAN AND GENTLEMEN,

I have the honour to submit to you, in accordance with the regulations of the Local Government Board, my seventh Annual Report on the Health and Sanitary Conditions of the Borough, viz., that for the year ending December 31st, 1919.

The Report contains the Vital and Mortality Statistics, the measures adopted for the prevention of disease, and the work carried out by the Public Health Department generally.

On account of the impossibility of estimating with any degree of accuracy the population at the various age periods, its distribution in the several wards and what section of it was engaged in the cotton industry, many tables have had to be omitted; and the Report has been again generally curtailed as regards certain particulars which do not vary from year to year and can be found in previous Reports.

I am,

Mr. Chairman and Gentlemen,

Your obedient servant,

J. COOTE HIBBERT.

Section I.

VITAL STATISTICS.

POPULATION.

The Population of the County Borough of Blackburn, taken at the Census of 1911, was 133,052, of which 61,788 were males and 71,264 females.

The Registrar-General estimates the population of the Borough for the year 1919 as follows :—

For the calculation of the death-rate 125,992

For the calculation of the birth-rate 131,246

The death-rate population excludes all non-civilian males, whether serving at home or abroad.

The birth-rate population, on the other hand, is intended to include all elements of the population contributing to the birth and marriage rates. It consists therefore of the death-rate or civil population *plus* all non-civilians enlisted from this country, whether serving at home or abroad. This non-civilian element has been distributed over all the districts in the country in proportion to their estimated civilian population.

MARRIAGES.

The number of marriages during 1919 was 1,480, as compared with 856 during 1918.

Of these, 713 took place in the Established Churches, 763 in the Nonconformist places of worship and at the Register Office, 2 in the Friends' Meeting House, and 2 in the Jewish Synagogue.

The rate of persons married per 1,000 of the total population was 22.5.

BIRTHS.

The number of births registered during the year in Blackburn was 1,835, of which 942 were males and 893 were females.

After correction according to instructions from the Registrar-General, viz., that 6 of these births be allocated to other districts, and 9 which occurred in other districts be included in the total for Blackburn, the net births for the year were 1,838, which is equal to a birth-rate of 14.0 per 1,000 of the population.

The following were the birth-rates per 1,000 total population for England and Wales and Blackburn during 1919:—

England and Wales	18.5
96 Great Towns (including London)	19.0
148 Smaller Towns	18.3
Blackburn	14.0

The birth-rate is very low and makes unfavourable comparison with the death-rate. It is of interest to note that of the industrial Lancashire County Boroughs those engaged

chiefly in the cotton industry have the lowest birth-rates, as will be seen from the appended list :—

	Per 1,000 Populat'n.
Barrow	21.2
St. Helens	25.4
Bootle	24.0
Liverpool	23.8
Warrington	21.3
Wigan	22.3
Manchester	18.9
Salford	18.4
Preston	17.6
Bolton	16.3
Burnley	15.3
Oldham	15.3
Rochdale	13.8
Bury	12.8
Blackburn	14.0

NOTIFICATION OF BIRTHS UNDER THE NOTIFICATION OF BIRTHS ACT, 1907.

Total Number of Births notified under this Act	1,953
Number notified by Medical Men	178
,, ,, Midwives	1,626
,, ,, Parents	123
,, ,, Other Persons	26

ILLEGITIMATE BIRTHS.

Of the 1,838 registered births, 112 (or 6.0 per cent.) were illegitimate, and 11 of these occurred at the Union Infirmary.

A Doctor attended the birth in	6 cases.
A Doctor and Midwife in	15 ,,
A Midwife alone in	78 ,,
Not stated	2 ,,

The mortality rate for illegitimate infants (number of deaths under one year of age per 1,000 illegitimate births) was 151.7, as compared with 90.9 for legitimate infants.

STILLBIRTHS.

The total number of stillborn children (including some miscarriages) brought to the Cemetery during the year was 73.

The number of stillbirths notified by medical men and midwives during the year under the Notification of Births Act was 93 (males, 47; females, 39; sex not stated, 7).

Number notified by Medical Men	15
--------------------------------------	----

Number notified by Midwives	78
-----------------------------------	----

A medical man attended the confinement in 12 cases; a medical man and midwife in 11; a midwife in 70.

The age of the foetus was full term in 47 cases; 8 months in 12; and 7 months in 24. In the remaining 10 cases this information was not obtained.

DEATHS.

In Table I. will be found a classification of deaths in Blackburn during 1919, according to disease.

During the year there were 2,008 deaths, of which 988 were males and 1,020 females.

Corrections have been made as regards the deaths of persons who belonged to outside districts and who died in Blackburn, of Blackburn residents who died in outside districts, and of members of His Majesty's Forces.

The total number of non-residents who died in institutions, etc., in this Borough, was 161; the number of deaths amongst Blackburn residents occurring in districts outside was 63.

Deaths among members of His Majesty's Forces are excluded from the various Tables, even if they took place within the Borough.

The resulting death-rate was 15.9 per 1,000, as compared with 19.5 for the previous year.

Except where otherwise stated, the various death-rates for the Borough have been calculated on the estimated civilian population (see page 6).

The following were the death-rates per 1,000 living for England and Wales and for Blackburn during 1919 :—

England and Wales	13.8
96 Great Towns (including London) ...	13.8
148 Smaller Towns	12.6
Blackburn	15.9

Table I.
Classification of Deaths according to Disease.

CAUSE OF DEATH.	1913.	1914.	1915.	1916.	1917.	1918.	1919.	
	Total De'ths	Total De'ths	Total De'ths	Total De'ths	Total De'ths	Total De'ths	Total De'ths	Death Rate.
Enteric Fever	8	7	6	2	1	4	1	0.008
Smallpox .....	...	...	...	...	...	...	...	0.00
Measles	10	20	44	14	21	39	...	0.00
Scarlet Fever	1	10	6	4	2	2	2	0.01
Whooping Cough	7	9	39	7	11	26	11	0.08
Diphtheria and Croup.....	7	7	8	9	8	11	3	0.02
Influenza	35	24	32	25	14	338	187	1.48
Erysipelas	1	3	...	2	2	1	1	0.008
Phthisis (Pulmonary Tuberculosis)	88	124	109	115	119	126	116	0.92
Tuberculous Meningitis ...	12	12	14	7	13	17	10	0.08
Other Tuberculous Disease's	37	20	28	22	23	20	17	0.13
Cancer, Malignant Disease	139	134	157	136	152	131	165	1.30
Rheumatic Fever.....	7	5	16	10	2	2	2	0.01
Meningitis	29	24	18	23	14	21	5	0.03
Organic Heart Disease...	234	256	232	257	274	214	269	2.13
Bronchitis	193	246	263	220	190	189	269	2.13
Pneumonia (all forms) ...	219	192	201	162	155	266	210	1.66
Other Diseases of respiratory organs	20	18	15	30	26	27	16	0.12
Diarrhoea and Enteritis ...	140	60	59	29	36	27	26	0.20
Appendicitis and Typhlitis	12	12	8	7	16	7	9	0.07
Cirrhosis of Liver	6	10	12	7	4	6	3	0.02
Alcoholism	6	3	2	4	...	...	...	0.00
Nephritis and Bright's Disease	84	82	72	44	46	65	51	0.40
Puerperal Fever	3	6	3	4	1	2	5	0.03
Other accidents and diseases of Pregnancy and Parturition	13	12	5	4	9	9	6	0.04
Congenital Debility and Malformation, including Premature Birth	141	137	112	110	70	73	84	0.66
Violent Deaths, excluding Suicide	53	45	33	47	60	52	40	0.31
Suicide.....	20	27	13	25	12	10	8	0.06
Other Defined Diseases...	533	451	502	419	451	442	428	3.39
Diseases ill-defined or unknown	61	50	53	34	35	48	64	0.50
Total	2119	2006	2062	1779	1767	2175	2008	15.93

INQUESTS.

The total number of Inquests held during the year was 133, as compared with 135 during 1918.

The number of uncertified deaths occurring during the year was 8, 5 of which were of infants under one year of age.

INFANTILE MORTALITY.

During 1919 the death-rate of children under 1 year per 1,000 births was 94.6, as compared with 125.0 during 1918.

The Infantile death-rates for England and Wales during 1918 and 1919 were as follow :—

	Deaths under 1 Year per 1,000 births.	
	1918.	1919.
England and Wales	97	... 89
96 Great Towns (including London) ...	106	... 93
148 Smaller Towns	94	... 90

It will be seen that the Infantile Mortality Rate for Blackburn for the year 1919 showed a decrease as compared with previous years, and is the lowest on record in the Borough.

TABLE II.
Infantile Mortality in Wards from 1910 to 1919.

WARD.	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919	Average for 10 years.
St. Stephen's	101.8	157.3	113.5	120.8	121.2	144.2	83.3	86.4	145.6	116.2	119.0
Trinity ...	191.4	162.3	140.5	229.4	144.5	193.4	119.3	102.3	121.9	118.0	152.3
St. Michael's	101.5	96.4	81.4	78.5	131.2	130.9	98.5	93.4	113.4	53.1	97.8
St. John's	115.6	189.0	121.9	128.2	84.4	125.8	141.6	103.4	133.3	129.0	127.2
St. Silas' ...	37.0	120.5	69.4	58.8	40.9	72.5	98.2	73.1	100.0	51.2	72.1
St. Paul's	135.1	194.6	122.3	142.8	100.4	114.8	110.3	135.1	146.3	90.3	129.2
St. Peter's	177.2	315.4	116.8	222.8	129.6	184.0	96.7	180.7	147.3	68.0	163.8
St. Mary's	226.0	280.5	115.9	222.9	142.8	194.1	157.4	127.9	213.3	131.3	181.2
St. Matthew's	141.0	180.6	115.7	142.8	140.2	160.0	72.8	111.1	118.1	75.8	125.8
St. Thomas's	129.4	172.1	105.4	132.3	80.7	139.1	88.0	112.6	75.1	88.8	112.3
Park	133.3	258.3	147.9	158.3	138.8	128.8	212.6	142.8	157.0	101.3	157.9
St. Luke's	173.0	212.2	168.5	144.8	140.6	183.5	147.6	101.0	122.8	117.1	151.1
St. Mark's	100.9	156.0	90.4	157.8	80.9	93.5	175.6	111.1	97.0	95.2	115.8
St. Andrew's	140.5	176.9	143.4	122.3	120.3	175.1	124.4	84.5	91.5	75.5	125.4
Borough ...	136.0	186.9	119.2	147.8	116.2	145.6	121.0	110.7	125.0	94.6	130.3

TABLE III.

Death Rates under One year of age.

CAUSE OF DEATH.	Rates per 1,000 Births.									
	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919
Small-pox	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Chicken-pox	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Measles	3.0	1.7	4.7	1.7	1.7	5.3	1.9	2.4	4.5	0.0
Scarlet Fever.....	0.3	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Whooping-cough	2.0	9.8	5.1	1.3	2.1	8.5	1.4	3.0	3.8	0.5
Diphtheria and Croup	0.0	0.3	0.0	0.0	0.3	0.0	0.0	0.6	0.0	0.0
Erysipelas	0.3	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.0
Tuberculous Meningitis	1.0	0.7	0.7	1.0	0.0	0.4	0.4	1.8	3.2	1.0
Abdominal Tuberculosis	4.7	1.0	2.1	4.1	1.4	2.0	1.4	1.8	2.5	0.5
Other Tuberculous Diseases ...	0.6	1.0	0.3	0.3	0.3	0.8	0.0	0.0	0.6	0.0
Meningitis (<i>not Tuberculous</i>)..	3.4	3.1	1.4	2.4	0.7	0.4	2.4	2.4	1.9	0.0
Convulsions	8.8	9.1	13.5	13.0	9.2	9.8	8.2	12.3	5.1	4.9
Laryngitis	0.0	1.0	0.0	1.0	0.3	0.8	0.4	0.0	0.0	0.0
Bronchitis	14.2	15.0	9.8	11.6	13.5	23.2	13.5	11.0	14.8	11.4
Pneumonia (all forms)	13.5	14.3	12.4	11.6	10.3	15.0	14.0	11.0	10.9	10.8
Diarrhoea	11.8	58.1	11.3	29.8	12.1	11.4	5.3	8.0	10.9	5.4
Enteritis	8.4	0.0	0.0	5.1	0.7	5.7	4.8	1.2	3.2	0.0
Gastritis	0.0	0.0	0.0	0.0	0.7	2.0	1.9	0.0	0.0	0.5
Syphilis	0.6	1.4	0.7	1.7	0.3	0.8	0.9	0.6	3.2	0.5
Rickets	0.3	0.7	0.0	0.3	0.7	1.2	0.0	0.6	0.0	1.0
Suffocation, overlying	0.6	0.7	1.0	1.0	1.7	1.2	0.0	0.6	0.0	0.5
Injury at Birth	1.0	0.0	0.0	0.3	1.7	0.8	0.0	0.6	0.0	0.5
Atelectasis	1.3	0.3	1.0	1.7	1.7	2.0	3.3	1.8	2.5	1.6
Congenital Malformations	4.7	4.9	4.3	1.0	5.0	6.1	5.8	4.3	6.4	2.7
Premature Birth	21.3	25.5	24.0	20.5	20.7	22.8	30.0	23.9	30.9	26.6
Atrophy, Debility and Marasmus	14.9	25.9	19.3	25.4	22.1	15.0	16.4	12.9	9.7	16.3
Other causes	18.3	11.5	6.5	12.3	7.4	10.6	8.2	9.2	10.3	9.2

TABLE IV.
Infantile Mortality Rates in Blackburn.

Year.	Rate per 1000 Births.
1881	181
1882	205
1883	185
1884	173
1885	142
1886	157
1887	204
1888	190
1889	221
1890	194
1891	207
1892	199
1893	241
1894	168
1895	235
1896	172
1897	207
1898	204
1899	193
1900	221
1901	193
1902	157
1903	158
1904	191
1905	146
1906	155
1907	151
1908	149
1909	127
1910	136
1911	186
1912	119
1913	147
1914	116
1915	145
1916	121
1917	110
1918	125
1919	94

As in the Annual Reports for the years 1914 to 1918, Tables V. and VI. were compiled with a view to showing what effect, if any, engagement of mothers away from home had on their children during the early months of life. The figures for the year under Report give somewhat more definite evidence than those in previous years that the children of industrial mothers suffer more than those of non-industrial mothers, both up to the age of 6 months and also up to the age of 18 to 24 months.

The following Local Government Board Tables are given in the Appendix :—

I.—Vital Statistics of the whole Borough during 1919
and previous years.

II.—Cases of Infectious Disease notified during 1919.

III.—Causes of, and ages at, Death during 1919.

IV.—Deaths under One Year during 1919.

Table V.

Investigation of Children who attained or should have attained the age of 6 months during the year (*i.e.*, children born from July 2nd, 1918, to June 30th, 1919).

Number of children who should have attained the age of 6 months during the year 1919	1512
Number of children who attained the age of 6 months during the year and were investigated	1214
Number of children who died before attaining 6 months of age and were investigated	123
Number of children who were not visited or could not be traced	175

	CHILDREN OF *INDUSTRIAL MOTHERS.															CHILDREN OF NON-INDUSTRIAL MOTHERS.								
	Children Investigated	FEEDING.				Whether nursed away from home.		When Mother ceased work before confinement.					When Mother resumed work after confinement.					Children Investigated	FEEDING.				Whether nursed away from home.	
		Entirely fed on the breast up to end of 6th month	Fed on the breast and artificially	Entirely artificially fed.	Not fed.	Yes.	No.	Under 1 week	Over 1 week and under 1 month	Over 1 month and under 2 months	Over 2 months and under 3 months	Over 3 months and under 5 months	Under 1 week	Over 1 week and under 1 month	Over 1 month and under 2 months	Over 2 months and under 3 months	Over 3 months and under 7 months		Entirely fed on the breast.	Fed on the breast and artificially.	Entirely artificially fed.	Not fed.	Yes.	No.
Satisfactory	365 71.6	92 25.2	225 61.7	48 13.1	0 0.0	154 42.2	211 57.8	3.3 9.0	44 12.0	63 17.2	84 23.0	115 31.5	0 0.0	18 5.0	43 11.8	50 13.7	81 22.2	599 72.4	352 58.8	157 26.2	90 15.0	0 0.0	0 —	0 —
Fairly satisfactory	84 16.5	8 9.5	55 65.5	21 25.0	0 0.0	35 41.7	49 58.3	5 6.0	6 7.1	23 27.4	15 17.8	25 30.0	0 0.0	1 1.2	12 14.3	16 19.0	17 20.2	128 15.5	35 27.3	59 46.1	34 26.6	0 0.0	0 —	0 —
Unsatisfactory	10 1.9	3 30.0	3 30.0	4 40.0	0 0.0	5 50.0	5 50.0	1 10.0	3 30.0	2 20.0	3 30.0	1 10.0	0 0.0	3 30.0	0 0.0	0 0.0	0 0.0	28 3.4	3 10.7	16 57.1	9 32.2	0 0.0	0 —	0 —
Dead	51 10.0	18 35.3	3 5.9	19 37.2	11 21.6	19 37.2	32 62.8	6 11.8	14 27.4	9 17.6	12 23.5	8 15.7	0 0.0	2 4.0	3 5.9	1 2.0	2 4.0	72 8.7	20 27.8	8 11.1	20 27.8	24 33.3	0 —	0 —
Total.....	510 100.0	121 23.7	286 56.1	92 18.0	11 2.2	213 41.8	297 58.2	45 8.8	67 13.1	97 19.0	114 22.3	149 29.2	0 0.0	24 4.7	58 11.3	67 13.1	100 19.6	827 100.0	410 49.6	240 29.0	153 18.5	24 2.9	0 —	0 —

* Mothers who continue to work away from home after the 4th month of pregnancy or who resume work within 6 months after confinement.

Table VI.

Investigation of Children who attained or should have attained the age of 18 to 24 months during the year 1919.

(This is a further following up of children referred to in Table V. of the Annual Report for 1918)

Number of children investigated between the 18th and 24th month of their age	1107
(74 of the 1,181 children referred to in the Report for 1918 were untraceable.)	
Number of these children who were living	913
Number of these children who had died	194

Number of Cases Investigated	Dead						Living at age of 18 to 24 months						Feeding	
	Number of Children who have Died	Dead			Living at age of 18 to 24 months			Satisfactory	Fairly Satisfactory	Unsatisfactory			Entirely fed on the breast up to the end of the 6th month	Entirely fed on the breast up to the end of the 9th month
		Under 3 months	3 months and under 6 months	6 months and under 12 months	Over 12 months	Number of Children Living	Percentage			Number showing definite signs of Rickets	Number showing retarded development	Number showing other signs of ill-health		
		Percentage			Percentage								Percentage	
GROUP A.														
Children of *Industrial Mothers	512	100 (19.5)	9.2	3.1	3.9	3.3	412 (80.4)	48.6	8.8	7.6	9.0	6.4	9.0	19.1
GROUP B.														
Children of Non-Industrial Mothers	595	94 (15.8)	8.2	1.3	3.9	2.4	501 (84.2)	56.3	10.1	5.0	7.2	5.6	13.1	37.5

*Mothers who continue to work away from home after the 4th month of pregnancy or who resume work within 6 months after confinement.

Section II.

MATERNITY AND CHILD WELFARE WORK.

This work is carried out by the 6 Lady Health Visitors, 2 of whom also perform the duties of Inspectors of Midwives. One of the Health Visitors is chiefly engaged in the visiting of cases of Measles and Whooping Cough.

The work may be divided into the following sections :—

(1) Home Visiting—

(a) of Infants,

(b) of Expectant Mothers.

(2) Work at the Maternity and Child Welfare Centres.

(3) Supervision of Midwives.

(4) Visiting by Special Health Visitor of cases of Measles and Whooping Cough.

1.—(a) HOME VISITING OF INFANTS.

The Notification of Births Act, which has been in force in this Borough since 1908, enables the Department to obtain early information of all births, and the 6 Lady Health Visitors have visited the homes where 1,750 of the 1,838 births registered during the year have occurred.

It will thus be seen that the large majority of infants born in the Borough are visited. If a doctor is not in attend-

ance at the birth, the first visit is paid during the mother's lying-in period, and by this means not only are particulars obtained about the child and advice given to the mother concerning its feeding and general welfare, but also the work of the midwife is supervised.

Efforts are made to induce the mother to undertake breast feeding and, if such feeding is impossible, advice is given on the artificial feeding of the infant.

Subsequent visits are paid to the child during the first two years of its life, the number of which depending upon the conditions of each individual case; but every child is visited at birth, at the end of the 3rd, 6th and 9th months, and between the ages of 18 and 24 months.

At these subsequent visits, 8,957 of which were paid during the year, attention is also given to the general hygiene of the home.

(b) HOME VISITING OF EXPECTANT MOTHERS.

148 expectant mothers have been visited at their homes on one or more occasions by the Inspectors of Midwives. The circumstances of each case are investigated so that advice and help may be given when necessary. These expectant mothers are also advised to attend the Maternity Centres of their districts.

2.—WORK AT THE MATERNITY AND CHILD WELFARE CENTRES.

Four Centres have been open during the year, namely, at the Health Office, Town Hall; at No. 51, Copy Nook; at No. 119, Bolton Road; and No. 26, Adelaide Street.

They are situated, as far as possible, in the midst of poor and populous districts. Previously the Centres were

open only one afternoon a week from 2-0 to 4-30 p.m., but in the case of the Centre at Copy Nook the attendance was so satisfactory that it was necessary to open the Centre on two afternoons a week and to enlarge the premises.

The Centres are under the control of the Medical Officer of Health, and each is conducted by the Inspector of Midwives and by the Health Visitor of the district in which the Centre is situate. At each session the children are weighed and advice is given to the mothers as to the feeding and care of their infants. Short talks or popular lectures on health matters generally are also given by the Medical Officer of Health or other members of the staff of the Health Department. Mothers are also encouraged to bring older children who are under school age to the Centres.

Expectant mothers are invited to attend the Centres, so that they may receive advice as to the care of themselves during pregnancy and as to their preparation for maternity. Although their attendance is not as good as one could wish, it is gradually improving.

Sets of model clothing for infants are on view and patterns of the various garments are supplied to mothers, assistance being given in the cutting out and making of the various articles.

During the year also special stress has been laid on the economical and proper selection and cooking of food.

Free grants of milk have been made to expectant and nursing mothers and to children under 5 years of age in necessitous cases.

SUMMARY OF ATTENDANCES AT THE CENTRES.

	Health Office.	Copy Nook.	Bolton Road.	Adelaide Street.
No. of Sessions	47 ...	96 ...	49 ...	46
No. of Infants attending under the age of 12 months	101 ...	305 ...	166 ...	136
Average Attendance of Infants under the age of 12 months	16.9 ...	24.5 ...	19.1 ...	18.3
No. of Children attending over the age of 12 months	60 ...	203 ...	75 ...	71
Average Attendance of Infants over the age of 12 months	7.3 ...	17.6 ...	8.9 ...	9.9
No. of Mothers attending	139 ...	413 ...	196 ...	167
Average Attendance of Mothers per Session	21.9 ...	35.0 ...	25.4 ...	24.0
No. of Expectant Mothers attending	16 ...	53 ...	26 ...	33

3.—SUPERVISION OF MIDWIVES.

Two of the Health Visitors, *i.e.*, Miss St. Stephens and Miss Lowe, also carry out the duties of Inspectors of Midwives.

This work includes the following :—

- (a) Inspection of registers and case books kept by the Midwives, the condition of their appliances and instruments, and the cleanliness of their person and of their homes.
- (b) The supervision of their work at the labours and during the lying-in period.

- (c) Instruction of the Midwives in matters pertaining to their work.
- (d) Investigation of cases of Puerperal Fever, Ophthalmia Neonatorum and of any cases in which it is suspected that the Midwife has not carried out her duties in a proper manner.

150 visits were paid to Midwives practising within the Borough during the year.

39 Midwives notified their intention to practice during the year. Of these, 2 removed, leaving 37 names on the register at the end of the year.

Three of the 39 Midwives acted as maternity nurses only.

Of the 39 Midwives, 26 have been trained and have obtained certificates after examination; the remainder are on the Midwives' Roll by virtue of their having been in practice previous to the passing of the Midwives' Act, 1902. Three of the Midwives are too illiterate to write up their cases in the case books, and one is incapable of recording pulse or temperature.

All the Midwives wear washable dresses and aprons, and carry bags fitted with the necessary appliances.

In three instances Midwives have failed to comply with one or other of the Rules of the Central Midwives' Board, and have been interviewed on the matter by the Medical Officer of Health.

3 cases of Puerperal Fever occurred in the Midwives' practice during the year.

Eight cases of Ophthalmia and 10 of slight inflammation of the eyes have occurred in the Midwives' practice.

In a few instances "handy women" have acted as Midwives in cases of emergency, but as a rule a medical man or midwife has taken charge of the case after the emergency has been dealt with. In every instance the "handy woman" has been cautioned against acting as a Midwife.

On the whole the Midwives' work has been carried out in a satisfactory manner.

PROPORTION OF BIRTHS ATTENDED BY DOCTORS AND
MIDWIVES RESPECTIVELY.

Of the 1,838 Births registered during the year:—

A Doctor

was engaged for and conducted the labour in 611

A Midwife

was engaged for and conducted the labour in 1,205

A Handywoman conducted labour in I

Children born in workhouse and no particulars obtained

No. of instances a Midwife called in a Doctor during labour 80

No. of instances a Midwife called in a Doctor
after labour—

(a) on account of mother's condition ... 106

(b) on account of child's condition 60

Maternity bags, supplied by the War Relief Committee, were given out by the Inspectors in 22 cases. These bags are lent for the confinement in cases of poverty.

4.—VISITING CASES OF MEASLES AND WHOOPING COUGH.

Cases of Measles and Whooping Cough are visited by one of the Health Visitors to see that the patients are properly isolated and that children contacts are excluded from School. If no medical practitioner is in attendance, advice is given on the general care of the patients; but mothers are warned as to the serious nature of these diseases and advised to call in the doctor.

The number of cases reported during the year was 103 of Measles and 169 of Whooping Cough; all except a few were visited.

When the cases reported are too numerous for the one Health Visitor to deal with, the male Sanitary Inspectors assist in the home visiting of the cases.

PROPOSED MATERNITY HOSPITAL.

The provision of a small Maternity Hospital for the Borough has been under consideration by the Health Committee, and a scheme has been submitted to and approved by the Ministry of Health.

It is proposed to provide for the following :—

- (1) Diseases of Pregnancy.
- (2) Difficult or complicated labour.
- (3) Normal labour if the home conditions are such that the removal of the patient to the Hospital for her confinement is advisable.

The work of altering the Nurses' Home, St. Peter Street, for this purpose, has been commenced.

Table VII.—Deaths in Childbed during the last Five Years.

Cause of Death.	1915	1916	1917	1918	1919
Abortion .....	...	...	1	1	1
Hæmorrhage .....	...	...	1	1	...
Uncontrollable Vomiting .....	...	...	1	...	1
Ectopic Gestation.....	...	...	...	...	...
Other Accidents of Pregnancy .....	...	...	...	...	...
Puerperal Hæmorrhage	1	...	...	...	...
Other Accidents of Child Birth.....	3	2	3	7	4
Puerperal Fever	3	4	1	2	5
Puerperal Nephritis and Uræmia .....	...	...	...	...	...
Puerperal Albuminuria and Brights Disease .....	...	...	...	...	...
Puerperal Convulsions	1	2	2	...	...
Puerperal Phlegmasia, Alba-dolens, and Phlebitis .....	...	...	...	...	...
Puerperal Embolism and Sudden Death .....	...	...	1	...	...
Puerperal Insanity .....	...	...	...	...	...
Puerperal Diseases of Breast.....	...	...	...	...	...
Total	8	8	10	10	11

Section III.

INFECTIOUS DISEASES.

The death-rates for the principal infectious diseases per 1,000 living during 1919 are given below, and compared with the average rates for the 96 great towns of England and Wales.

	96 Large Towns.	Black- burn.
Smallpox.....	0.00	0.00
Measles	0.13	0.00
Scarlet Fever	0.04	0.01
Whooping Cough	0.07	0.08
Enteric Fever.....	0.01	0.008
Diphtheria	0.14	0.02
Diarrhoea and Enteritis under 2 years. { per 1000 population	0.26	0.09
	per 1000 births ...	12.24
		6.52

TABLE VIII.
Shewing number of cases of Infectious Diseases notified from 1902 to 1919.

Disease.	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919
Smallpox	49	92	2	4	...	1	...	2	1	...	...	...	...	...	...	...	...	...
Diphtheria (including Mem-branous Croup)	83	132	60	157	166	150	100	102	96	107	55	76	62	39	52	50	57	30
Erysipelas ...	76	66	81	132	112	99	81	94	90	77	87	90	97	69	66	40	52	38
Scarlet Fever ...	494	339	458	1578	849	544	595	1013	795	343	116	268	704	460	153	96	150	136
Enteric Fever	127	97	111	90	82	61	85	69	46	49	26	31	31	44	14	13	13	3
Puerperal Fever	18	11	7	24	12	25	11	11	10	9	9	8	10	5	5	3	5	5
Typhus Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cerebro Spinal	...	...	...	...	...	...	...	...	...	...	1	...	...	2	...	1	2	...
Meningitis ...	...	...	...	...	...	...	...	...	...	...	4	1	...	1	...	...	...	...
Polionyelitis ...	...	...	...	...	...	...	...	...	...	...	...	217	230	212	213	154	131	176
Pulmonary	...	...	...	...	...	...	...	...	...	...	...	104	60	88	49	47	54	47
Tuberculosis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Other forms of	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Tuberculosis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Ophthalmia	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Neonatorum	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Measles.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Encephalitis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Lethargica	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5
Dysentery	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3
Malaria ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	61
Pneumonia ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	114
Totals	847	737	719	1985	1221	880	872	1291	1038	585	515	808	1191	937	1592	2325	2083	689

SMALLPOX AND VACCINATION.

There has been no case of Smallpox in the Borough during the year. The last case occurred in 1910.

The vaccination returns for the year are as follow :—

No. of children vaccinated	370
„ „ exempted	841
„ „ removed from district	8
„ „ insusceptible	0
„ „ not accounted for & not vaccinated	479
„ „ died unvaccinated	116
„ of vaccinations postponed	13

SCARLET FEVER.

The number of cases notified during the year 1919 was 136, as compared with 150 during 1918 and 96 during 1917.

The following were the cases and deaths in age-periods during 1919 :—

Age Period	0-1	1-2	2-5	5-10	10-15	15-20	20-25	25-35	35-45	45-55	TOTAL
Cases	3	23	78	27	2	2	1	...	...	136
Deaths...	1	1	...	...	...	...	...	...	2

Death-rate per 1,000 living, 0.01; case mortality per cent., 1.4.

DIPHTHERIA AND MEMBRANOUS CROUP.

The number of cases notified during the year 1919 was 30, as compared with 57 during 1918 and 50 during 1917.



The following were the cases and deaths in age-periods during 1919 :—

Age Period	0-1	1-2	2-5	5-10	10-15	15-20	20-25	25-35	35-45	45-55	TOTAL
Cases ...	1	2	9	11	3	...	1	...	2	1	30
Deaths..	...	...	1	2	...	...	...	...	...	...	3

Death-rate per 1,000 living, 0.02, case mortality per cent., 10.0.

TYPHOID OR ENTERIC FEVER.

The number of cases notified during the year 1919 was 3, compared with 13 during 1918.

The following were the cases and deaths in age-periods during 1919 :—

Age Period	0-1	1-2	2-5	5-10	10-15	15-20	20-25	25-35	35-45	45-55	TOTAL
Cases	1	..	1	...	...	1	...	...	3
Deaths..	1	...	...	...	...	...	...	...	1

Death-rate per 1,000 living, 0.008; case mortality per cent., 33.3.

Under the powers given in the Blackburn Corporation Act, 1908, shellfish collected from certain beds, which were found to be polluted with sewage, were stopped from being sold within the Borough.

ERYSIPelas.

During 1919, 38 cases of Erysipelas were notified, and one death was registered.

PUERPERAL FEVER.

There were 5 notifications of Puerperal Fever received from Medical Practitioners during 1919.

All of the cases terminated fatally.

MEASLES.

103 cases of Measles were reported during the year, compared with 1,560 during 1918 and 1,938 during 1917.

The following Table gives the number of cases reported each month during the year :—

	January	February	March	April	May	June	July	August	September	October	November	December	Total
Cases Reported	3	4	2	7	18	10	11	1	5	17	10	15	103

The death-rate from Measles during 1919 was 0.0. as compared with 0.34 during 1918; the case mortality per cent. was 0.0.

WHOOPING COUGH.

There were 11 deaths from Whooping Cough during 1919, as compared with 26 during 1918 and 11 during 1917.

These 11 deaths occurred in the following age-periods :—

0—1

1—2

2—5

5—10

1

3

7

0

TUBERCULOSIS.

There were 143 deaths from Tuberculosis during 1919, as compared with 163 during 1918.

Of these 143 deaths, 116 were due to Tuberculosis of the Lungs.

The death-rate from all forms of Tuberculosis was 1.13 per 1,000 of the population, and from Pulmonary Tuberculosis 0.92 per 1,000. (See note on Table IX.)

During the year 171 notifications of cases of Tuberculosis were received from Medical Practitioners, compared with 230 received during 1918.

Of the 171 notifications received, 124 were cases of Tuberculosis of the Lungs, and 47 were cases of Tuberculosis in other organs of the body.

The following Table gives a Summary of the Notifications received from Institutions during the year :—

INSTITUTION.	Admitted.	Discharged
Tuberculosis Wards, Blackburn Infectious Diseases Hospital	92	85
Meathop Sanatorium, Grange-over-Sands	49	46
Stoke War Hospital .....	...	1
Elswick Sanatorium.....	...	1

In several instances a patient has been transferred from one institution to another, and therefore the same case may appear under the heading of more than one institution.

TUBERCULOSIS DISPENSARY.

During the first half of the year a room in the Offices of the Health Department was used for the Dispensary, but the special building in Duke Street was opened in July.

The number of persons examined at the Dispensary for the first time during the year was as follows :—

	Males.	Females.	Total.
Insured persons	85	40	125
Non-insured persons	25	36	61
—	—	—	—
	110	76	186

The total number of persons attending the Dispensary for treatment or for observation was 269, and the patients made a total number of 629 attendances.

TABLE IX.
Deaths from Tuberculosis for Ten Years.

	1911.	1912.	1913.	1914.	1915.	1916.	1917.	1918.	1919.	1920.
	Deaths									
	Death Rate									
Tabes Mesenterica ...	22	91.0	13.0	15	21	11.0	11.0	11.1	11.1	11.0
Tuberculous Meningitis	15	13.0	8	6.0	1.2	0.5	0.5	0.5	0.5	0.5
Pulmonary Tuberculosis	611	08.0	611	18.0	65.0	124	124	111	111	111
Other Forms	7	50.0	8	60.0	11.0	0.1	0.1	0.0	0.0	0.0
Total	166	1.21	164	1.23	1.37	1.37	1.37	1.37	1.37	1.37

For the years 1916 to 1919 the Tuberculosis death rates have been calculated on a civilian population, which is of course considerably below that for previous years. This tends to increase the Tuberculosis death rates as compared with

Cases of Tuberculosis occurring among His Majesty's forces are discharged as unfit for service and the mortality is included in this table.

TABLE X.

Pulmonary Tuberculosis in Blackburn.

Year.	Deaths.	Death Rate (per 1,000).
1881	.....	1.90
1882	.....	1.80
1883	.....	1.90
1884	.....	1.70
1885	.....	1.30
1886	.....	1.80
1887	.....	1.50
1888	.....	1.50
1889	187	1.52
1890	214	1.80
1891	163	1.35
1892	132	1.09
1893	134	1.10
1894	148	1.20
1895	160	1.29
1896	142	1.14
1897	149	1.19
1898	154	1.22
1899	152	1.20
1900	148	1.16
1901	150	1.17
1902	163	1.25
1903	122	0.93
1904	125	0.94
1905	142	1.06
1906	124	0.92
1907	133	0.98
1908	148	1.09
1909	136	0.99
1910	110	0.80
1911	119	0.89
1912	109	0.81
1913	88	0.65
1914	124	0.92
1915	109	0.85
1916	115	0.94
1917	119	1.05
1918	126	1.13
1919	116	0.92

TABLE XI.

Treatment of Pulmonary Tuberculosis.—Meathop Sanatorium.

ADMISSIONS.

DISCHARGES.

	Stage of Disease.						N. I. Act.			Condition of Patients on Discharge.							
	Age Periods.	10 to 15	15 to 20	20 to 25	25 to 35	35 to 45	45 to 55	Early	Moderately advanced	Advanced	Treated by H'lh' Ins. Com.	Not insured	No improvement	Condition improved	Discharge Disease	Average stay in Sanatorium	
Males..... (29 cases)	2	3	6	8	10	...	15	14	...	9	16	4	28	4	13	11	...
Females..... (18 cases)	1	3	2	9	3	...	8	8	2	10	5	3	19	5	8	6	...
																81.1 days	119.6 days

TABLE XI.—Continued.

Fever Hospital (Tuberculosis Wards).

INFANTILE DIARRHŒA AND ENTERITIS.

The deaths from Diarrhœa and Enteritis of children under two years of age were 12, as compared with 20 during the year 1918.

Ten of these deaths occurred amongst children under 12 months of age.

CANCER.

There were 165 deaths from Cancer during the year, as compared with 131 during 1918.

VENEREAL DISEASES.

The scheme for facilitating the diagnosis and treatment of these diseases received the sanction of the Local Government Board towards the end of the year 1917, and came into operation on January 1st, 1918.

The following is a summary of the scheme :—

1.—*The provision of Laboratory facilities for diagnosis and guidance in treatment.*

Arrangements have been made with Professor Dean, of the Pathological Department of the University of Manchester, to carry out the examinations of specimens submitted by medical practitioners. Outfits for sending the specimens to the Laboratory are to be obtained from the Health Department, and are supplied to medical practitioners on application. The examinations are carried out free of cost to the practitioner.

2.—*The provision of facilities for treatment.*

A special out-patient clinic for the treatment of the diseases is held at the Blackburn and East Lancashire Royal Infirmary four times each week. Two Doctors have been

appointed by the Board of Management of the Infirmary to carry out this work. Free treatment is given to all comers, and strict secrecy is observed as regards the identity of the patients. Beds are reserved for the treatment of special cases which cannot be treated as out-patients.

3.—*The supply of Salvarsan or its substitutes free of charge to medical practitioners.*

These drugs are supplied free of charge to medical practitioners on certain conditions laid down by the Local Government Board.

The Medical Officer of Health can be consulted by patients as to the facilities for treatment.

The following Table sets forth the examinations of Venereal Disease specimens at the Pathological Department of the Manchester University as regards Blackburn patients :—

	SYPHILIS.				GONORRHOEA.	
	Fixation of Complement.		Treponema.		Gonococcus.	
	Positive	Negative	Positive	Negative	Positive	Negative
Special clinic Royal Infirmary	148	96	0	1	18	39
Medical Practitioners	18	32	2	0	2	4
Total ...	166	128	2	1	20	43

The number of patients from Blackburn attending the special out-patient clinic at the Royal Infirmary for the first time during the year was 297.

Of these—

179 were found to be suffering from Syphilis.

12	,	,	,	Soft Chancre.
57	,	,	,	Gonorrhœa.
49	,	,	,	conditions other than Venereal.

These patients made 2,342 attendances.

In addition, 12 in-patients were treated in the Royal Infirmary for Venereal Diseases, as follows :—

- 5 Syphilis.
- 4 Soft Chancre.
- 2 Gonorrhœa.
- 1 Syphilis and Soft Chancre.

The aggregate number of in-patient days of treatment given to these persons was 232.

VENEREAL DISEASES ACT, 1917.

This Act, the purpose of which is to prevent the treatment of Venereal Diseases otherwise than by a duly qualified medical practitioner and to control the supply of remedies therefor, came into full operation in the Borough during the year.

This Act is of the utmost importance, as the ineffectual treatment of Venereal Diseases by "quacks" has not only been responsible for spreading disease but also has been disastrous for the sufferers themselves.

One person was prosecuted under this Act and was fined £25.

INFLUENZA.

During the year, 187 deaths were certified as due to Influenza, giving a death-rate of 1.48 per 1,000 of the population. The majority of these deaths occurred during the first three months of the year.

DISINFECTION.

543 rooms at 415 houses were sprayed with Formalin after cases of infectious diseases, also 15 rooms at 3 schools.

The following articles were disinfected by steam :—475 beds, 353 mattrasses, 376 bolsters, 700 pillows, 549 quilts, 530 blankets, 292 sheets, 138 suits, 85 carpets, 136 rugs, 133 curtains, 1,239 sundries.

The following articles were removed to the Destructor and destroyed by consent of the owners :—20 beds, 21 mattrasses, 7 bolsters, 10 pillows, 5 sheets, 4 sundries.

CLEANSING STATION.

A Cleansing Station has now been erected adjoining the Disinfector at Throstle Street, and is available for use.

This will enable persons to cleanse their bodies while their clothing is being disinfected in the adjoining Disinfector. At the same time the bedding and other articles from the household can, if necessary, be disinfected, and in this way a thorough cleansing of any household carried out.

FEVER HOSPITAL.

The following Table gives a summary of the patients admitted to the Fever Hospital during 1919, not including cases of Tuberculosis.

It will be observed that the daily average number of beds occupied was 14.0, as compared with 18.6 for the previous year.

The average number of days each patient stayed in Hospital was 38.1.

Table XIII.—Fever Hospital.

SCARLET FEVER.

The total number of cases admitted during the year as Scarlet Fever was 105.

Nine cases notified to be suffering from Scarlet Fever were found on admission not to be suffering from Scarlet Fever.

Two deaths occurred, giving a case mortality of 2.0 per cent.

Two cases were admitted in the incubation stage of Chickenpox, and 7 other patients contracted this disease.

The Convalescent Scarlet Fever Pavilion (26 Beds) is still being used for patients suffering from Pulmonary Tuberculosis.

RETURN CASES.

One return case occurred during the year.

The following complications and sequelæ occurred amongst the Scarlet Fever patients :—

Rhinitis	16
Cervical Adenitis	10
Otorrhœa	13
Broncho Pneumonia	3
Arthritis	2
Mastoid Abscess	2
Albuminaria	1
Conjunctivitis	1

ENTERIC FEVER.

The total number of cases admitted to the Hospital certified as Enteric Fever was 2.

One case was admitted for observation and was found not to be suffering from the disease.

The true case died.

DIPHTHERIA.

24 cases were admitted to the Hospital notified as suffering from Diphtheria.

Six cases admitted as Diphtheria were found not to be suffering from the disease.

Of the 18 true cases, 5 were laryngeal cases.

Tracheotomy was performed on 4 of these 5 cases, and 3 recovered.

Among the 18 cases of Diphtheria there was one death, showing a case mortality of 5·5 per cent.

BACTERIOLOGICAL LABORATORIES.

The following work has been carried out at the Laboratories at the Fever Hospital and at the Public Health Office during the year :—

	Pos.	Neg.	Total.
<i>For the detection of Diphtheria Bacilli—</i>			
Swabs for diagnosis of cases			
in Hospital	9	...	16
... ... ...	...	...	25
Swabs from cases under private medical practitioners	8	...	85
... ... ...	...	...	93
Swabs from cases before discharge from Hospital ...	7	...	40
... ... ...	...	...	47
<i>For the detection of Tubercle Bacilli—</i>			
Sputum sent by private medical practitioners	51	...	261
... ... ...	...	...	312
Sputum sent by Tuberculosis Officer	40	...	119
... ... ...	...	...	159
<i>For the detection of spores of Ringworm—</i>			
Hair	—	...	2
... ... ...	...	...	2
Widal tests	—	...	3
... ... ...	...	...	3

Section IV.

FACTORIES AND WORKSHOPS.

Full attention has been paid during the year to the administration of The Factory and Workshop Act of 1901.

One of the Inspectors, namely, Inspector Kenyon, devotes his whole time to this work.

Table XIV. shows that there were 733 workshops on the register at the end of the year, and they contained 876 rooms, 31 of which were underground.

The register in 1919 showed a decrease of 46 workshops as compared with those existing in 1918.

The approximate number of males employed in these workshops was 1,234, and of females 978, as compared with 1,337 males and 1,076 females in 1918.

The visits to factories numbered 315, and to workshops 1,747, as compared with 16 and 371 such visits during 1918.

In Table XIV. are enumerated the defective conditions (284 in number) found to exist in the various premises visited. In Table XV. it will be seen that 261 defects have been remedied during the year. There were thus 23 defective conditions under notice at the end of 1919.

I.—SANITARY CONDITIONS AT WORKSHOPS.

(a) *Cleanliness.*

5 workshops were found to have dirty floors or windows, and 61 rooms required limewashing at the Inspector's visit.

(b) *Air Space.*

No rooms were found to be overcrowded.

(c) *Ventilation.*

3 workrooms were found to be deficient in ventilation.

(d) *Drainage of Floors on which Wet Processes are carried on.*

These processes include tripe-boiling, laundry work, etc., and the drainage of the floors has been so satisfactory that there has been no cause for complaint.

SANITARY CONVENiences IN WORKSHOPS.

The following is the character of the sanitary conveniences at the various workshops :—

620 Water-Closets.

146 Pail-Closets.

During 1919, notices for the provision of the following requirements were issued to 19 factories and 12 workshops :

Repairs or reconstruction of sanitary conveniences at factories	123
---	-----

Repairs or reconstruction of sanitary conveniences at workshops	14
---	----

SANITARY CONVENIENCES IN FACTORIES.

The following appears in Section 5, Factory and Workshop Act, 1901 :—

“Where it appears to an Inspector that any act, neglect, or default in relation to any drain, water-closet, earth-closet, privy, ashpit, water supply, nuisance, or other matter in a factory or workshop, is punishable or remediable under the law relating to Public Health, but not under this Act, that Inspector shall give notice in writing of the act, neglect, or default to the District Council in whose district the factory or workshop is situate, and it shall be the duty of the District Council to make such inquiry into the subject of the notice, and take such action thereon as seems to that Council proper for the purpose of enforcing the law, and to inform the Inspector of the proceedings taken in consequence of the notice.”

29 notifications under this Section 5 of the Factory and Workshop Act, 1901, have been received from H.M. Inspectors.

20 of these referred to factories, and 9 to workshops; the nuisances notified are included in Table XIV.

Due inquiries were made into the matters brought to my notice, and such action taken as was deemed necessary.

UNDERGROUND ROOMS.

There were 31 underground rooms on the register for 1919, including those used by bakers, as compared with 36 in 1914.

BAKEHOUSES.

There were 201 premises on the Workshop Register as wholesale, retail, and domestic retail bakehouses, or as sugar-boiling establishments.

These trades are carried on in 219 rooms, of which 3 are underground; 3 other underground bakehouses, which had been approved by the Local Authority, were not in use as bakehouses during the year.

103 males and 298 females are employed in the baking industry of this town.

In 27 of these bakehouses both sexes are employed.

37 notices have been issued with regard to insanitary conditions and defects.

UNDERGROUND BAKEHOUSES.

In use at the end of 1903	21
Closed during 1904	9
,, ,, 1905	5
,, ,, 1906	1
,, ,, 1907	0
,, ,, 1908	0
,, ,, 1909	0
,, ,, 1910	0
Untenanted	3
	— 18
	—
In use at the end of 1919	3

WORKPLACES.

The term "Workplace" is not defined in the Act, but it includes places where two or more persons meet regularly to perform some work, such work not being the making, altering, repairing, ornamenting, finishing, or adapting for sale of any article.

In connection with these places, 118 visits have been paid for the purpose of seeing that the provisions of the

Factory and Workshop Act, 1901, had been complied with, and 4 defective conditions were dealt with.

FOOD-PREPARING PLACES.

Under this heading are included all pork butchers' shops and other places (not including workshops) in which meat pies, black-puddings, sausages, potted meats, tongues, etc., are prepared for human consumption.

During the year 177 visits have been paid to these places, and the conditions generally have been found to be fairly satisfactory.

RESTAURANTS.

The kitchens of restaurants, hotels, and dining-rooms are included under the heading of "Workplaces."

The inspection of these places has been included in the visits to food-preparing places.

THE RECORD OF OUTWORKERS.

Lists of outworkers were sent in twice during the year by 1 employer, and once during the year by 41 employers.

19 visits were paid to dwellings where outworkers carried on their work. The greater part of this work is, however, carried on in premises which constitute workshops.

Table XIII.—Summary of Visits during 1919.

49

	January	February	March	April	May	June	July	August	September	October	November	December	Total
Factories.....	...	14	22	18	35	29	33	28	37	31	27	41	315
Workshops.....	51	154	103	198	197	181	107	120	141	203	139	153	1747
Workplaces .....	...	2	1	4	7	5	8	25	21	11	16	18	118
Outworkers .....	...	2	...	...	...	...	...	17	...	...	...	...	19
Offensive Trades	31	12	16	25	20	11	15	21	15	6	12	21	205
Complaints—Nuisances Investigated.....	...	7	15	7	9	·	3	9	3	9	2	6	70
Food-preparing and Storing Places.....	20	2	3	11	12	20	10	22	19	16	22	20	177
Work in Progress.....	...	4	5	18	22	22	28	22	44	38	24	27	254
Drains Tested .....	...	...	...	...	...	...	7	14	14	1	...	...	36
Total	102	197	165	281	302	268	211	278	294	315	242	286	2941

TABLE XIV.

Particulars of Registers and Nuisances found (Factories and Workshops).

TABLE XV.
Nuisances Remedied at Factories and Workshops.

Factories	Workplaces	Out Workers and Contractors	Tailors	Dressmakers	Milliners	Cloggers	Bootmakers	Curriers and Saddlers	Cabinet Makers and Carvers	Joiners and Masons	Bakers, Confectioners and Sugar Boilers	Basket Makers	Black and White Smiths	Blind and Chair Makers	Brushmakers	Chemists and Photographers	Coopers and Coach-builders	Cotton Waste Sorters and Upholsterers	Scale Makers and Cycle Makers	Hosiery, Underclothers and Shirtmakers	Polishers and Picture Framers	Painters and Plumbers	Printers and Paper Bag Makers	Wireworkers and Tinniers	Food Preparers	Miscellaneous	TOTALS.
Stoves Connected to Outer Air																											
No. of Rooms Ventilated																											
Internal Walls and Ceilings of Rooms Limewashed			II	2																							
Internal Floors, Windows and Walls of Rooms Cleansed																											
Inside Floors and Yards Badly Flagged or Paved, Repaired			I																								
Choked Drains (opened and cleansed)																											
Defective Drains Relaid																											
Defective Easing Troughs and Downspouts, Repaired																											
Defective Sink Waste Pipes (short)			I																								
Defective Trap Gullies and Dish Stones Replaced																											
Accumulations of Refuse and other Debris Removed	3																										
Gullies and Drains inside places removed																											
Ash Receptacles Provided																											
Low Chimneys Raised	I																										
Defective Soil-pipes and Urinals Repaired	1	2																									
General Repairs not Detailed	5	I																									
Defective W.C.'s Repaired, Replaced, or Reconstructed	89																										
Water Closets Lighted or Ventilated	16																										
Defective Connections & Fittings w.c. Flush Pipe to Pan Repaired	3				I																						
Closets Cleansed, Pans Cleansed, Walls and Tops Limewashed	21				3																						
Additional W.C.'s Provided	6																										
Separate Sanitary Accommodation Provided for the Sexes																											
Overcrowding Abated																											
Floors Drained																											
Illegal Occupation of Underground Bakehouses Rectified																											
Failure to affix Abstract referred to H.M. Inspector																											
No. of Defects Found, 284; Remedied, 261	I46	4	...	21	4	I	II	6	I	...	...	44			I	...	...	4	...	...	2	...	3	...	6	7	261

TABLE XIV.—*continued.*

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
No. ash receptacles and excreta pails to be emptied .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
No. without ash receptacles .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
No. of low chimneys	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
No. of defective soil pipes & urinals	2	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
No. of general repairs	2	1	...	...	3	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
No. of closets to be replaced and in want of repair	93	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...
No. of closets badly lighted or ventilated	27	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
No. of defective flushing apparatus	3	...	...	1	...	1	2	...	...	...	...	...	...	...	...	...	3	...	...	...	...	...	...	...	...	...	...	...	...
No. of closets cleansed & limewashed	19	...	...	4	...	...	...	...	...	...	...	...	...	...	...	...	...	3	...	...	...	...	...	...	...	...	...	...	...
No. insufficient closet accommodation	6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
No. of san. accom. for sexes not separated .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
No. of rooms overcrowded .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
No. of floors insufficiently drained .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Illegal occupation of underground bakehouse .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Failure to affix Abstract .....	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...
No. of Water Closets	94	73	36	43	9	7	12	155	5	12	2	11	6	1	7	6	12	6	28	3	17	...	20	4	15	620
No. of Pail Closets	4	13	11	19	6	2	2	7	50	5	5	2	1	...	4	2	3	...	2	3	4	1	5	146
No. of Privies	
No. of Notifications received from H.M. Inspector	20	...	...	1	...	...	2	1	...	...	1	...	1	...	...	...	...	...	2	...	...	...	...	...	1	...	...	...	29
Notifications sent to H.M. Inspector	13	...	...	2	...	...	3	2	7	4	1	...	...	38	...	1	1	...	2	...	...	...	...	...	...	...	...	...	13
No. of notices issued	27	2	...	17	3	2	7	4	1	38	...	1	1	...	2	2	7	4	119	
Total	217	6	...	779	629	304	343	288	79	83	112	1215	44	127	14	107	64	18	70	30	117	64	187	18	151	60	212	50	124	5512	

Section V.

SALE OF FOOD AND DRUGS ACT.

During the year 420 samples were purchased in Blackburn in the administration of the Food and Drugs Acts, of which 387 were milk and 23 skimmed milk.

Of the total number of samples taken and submitted to the Public Analyst, Mr. W. H. Roberts, M.Sc., F.I.C., 388 were found on analysis to be genuine.

The following Tables are of interest as showing the average composition of milk sold in Blackburn in different months of the year.

Nearly all the milk supplies coming into the Borough from outside districts were sampled, as well as milk from farms within the Borough.

THE PUBLIC HEALTH (MILK AND CREAM) REGULATIONS, 1912,

All the samples of milk taken during the year were examined for preservatives with negative results.

TABLE XVI.

Articles Purchased.	Number Analysed.	Number Genuine.	Number Adulterated.	Extent of Adulteration.	Action taken
Milk	387	359	28	Slightly watered do do 9% deficient in fat Slightly deficient in fat 15% deficient in fat 10% ,,, Slightly deficient in fat Slightly watered ,, deficient in fat ,, watered ,, deficient in fat Slightly watered Slightly watered 10% deficient in fat 18% ,,, ,, 12% ,,, ,, 15% ,,, ,, 11% ,,, ,, 5% of added water 13% of added water 20% of added water	Letter from M.O.H. Other samples taken and found genuine. do do Fined £2. Other samples taken & vendor fined. Fined £5. " £5. Letter from M.O.H. Other samples taken and found genuine. do do do Other samples taken & vendor fined Letter from M.O.H. Other samples taken and found genuine. do Fined £5. Fined £5. Fined £2. Fined £5. Fined £2. Case withdrawn on payment of 5/- costs. Fined £10. Fined 5/-
Carried forward	387	359	28		

Food and Drugs Act—Contd.

Articles Purchased.	Number Analysed.	Number Genuine.	Number Adulterated.	Extent of Adulteration.	Action taken.
Brought forw'rd Milk.....	387	359	28	Slightly watered 18% of added water 5% deficient in fat 22% of added water Slightly deficient in fat 16% of added water	Othes samples taken and found genuine Fined 5/- Other samples taken and found genuine Fined 5/- Other samples taken and found genuine Fined 5/-
Skimmed Milk	23	19	4	31% of added water 24% of added water Slightly watered	Fined £5. Informal. Other samples taken & found genuine Other samples taken and found genuine.
Margarine	3	3			Fined £10.
Baking Powder...	2	2			
Arrowroot	1	1			
Ground Ginger...	1	1			
Lard	1	1			
Flour	1	1			Informal.
Tea	1	1			
Total ...	420	388	32		

OTHER OFFENCES.

One milk seller was fined £1 os. od. for refusing to sell.

On six occasions Margarine was found not properly labelled, and warning letters were sent by the Medical Officer of Health.

5 milk cans were found not properly labelled, and warning letters were sent by the Medical Officer of Health.

Table XVII.

MILK SAMPLES BELOW THE LIMITS FIXED BY THE BOARD OF AGRICULTURE.

Month	No.	Amount of fat %	Amount of other solids %	Action taken.
Jan.	4	3·57	8·33	Letter from M.O.H. Other samples taken and found genuine.
		3·45	8·40	Do.
		3·62	8·38	Do.
		2·72	9·12	Fined £2.
March	2	2·87	8·98	Other samples taken and vendor fined.
		2·54	8·87	Fined £5.
April	4	2·70	8·85	Fined £5.
		2·90	8·60	Letter from M.O.H. Other samples taken and found genuine.
		4·40	8·30	Do.
		2·87	8·90	Do.
May	4	5·90	8·06	Do.
		2·95	9·05	Other samples taken and vendor fined.
		3·25	8·32	Letter from M.O.H. Other samples taken and found genuine.
		3·52	8·43	Do.
June	2	2·70	9·40	Fined £5.
		2·44	9·27	Fined £5.
July	4	2·64	8·90	Fined £2.
		2·53	8·78	Fined £5.
		2·67	9·00	Fined £2.
		3·72	8·05	Case withdrawn on payment of 5s. costs.
August	3	2·92	7·35	Fined £10*.
		3·15	6·79	Fined 5s.*
		3·90	8·35	Other samples taken and found genuine.
Sept.	5	2·85	9·10	Do.
		3·15	6·91	Fined 5s.*
		3·37	6·59	Fined 5s.*
		2·90	9·22	Other samples taken and found genuine.
		3·82	7·14	Fined 5s.*

*All from the same farmer. The cases tried the same day.

SKIMMED MILK SAMPLES BELOW THE LIMITS FIXED BY THE BOARD OF AGRICULTURE.

Month.	No.	Amount of fat %	Amount of other solids %	Action taken.
Feb.	2	2·35	5·83	Fined £5.
		*3·27	6·43	Informal. Other samples taken and found genuine.
March	2	*3·62	8·43	Other samples taken and vendor fined.
		*2·90	6·52	Fined £10.

* Watered milk, when purchased for analysis, alleged to be skimmed milk.

TABLE XVIII.

Average Amount of Fat and Non-Fatty Solids in the
Samples of Milk taken during 1919.

MONTH.	Number of Samples.	Average percentage of Fat.	Average percentage of Solids not Fat.
January	31	3.62	8.85
February	37	3.67	8.98
March	37	3.58	8.91
April	40	3.67	8.89
May	29	3.67	8.93
June	37	3.61	9.26
July	39	3.58	9.05
August	19	3.87	8.78
September	34	3.62	8.92
October	33	3.93	9.26
November	26	3.74	9.12
December	25	3.84	9.10
Total	387	3.70	8.92

It will be seen that, as in previous years, the average percentage of fat in the samples obtained during the year was well above the 3 per cent. limit fixed by the Board of Agriculture.

These samples include those which were considerably below the limits and in connection with which legal proceedings were taken.

MILK SUPPLY.

It is to be regretted that dairy farmers do not yet realise the importance of cleanliness.

No farm visited this year can be said to be anything like what it should be.

In most cases both the cows and the cowsheds were dirty.

The Veterinary Inspector visited 38 farms, inspected 67 cowsheds, and examined the udders of 668 cows. No case of tuberculosis of the udder was discovered.

94 mixed samples of milk, representing the milk from 1,859 cows, were taken for examination for tuberculosis.

Three of these samples, representing the milk of 49 cows, were positive.

In one case the farmer had sold all his stock before the result of the test was known.

The other two samples were found to be one infection, and it was ascertained that a cow had been sent to the knacker yard prior to the Veterinary Inspector's visit.

Subsequent mixed samples proved negative.

No. 1 sample was from a farm situated outside the Borough. Nos. 2 and 3 from farms within the Borough.

There are 34 Dairies and Milk Shops on the register, and 225 visits were made in connection with the same.

MEAT INSPECTION.

Mr. Burndred resumed his duties as Veterinary Inspector in May.

Meat Inspection is carried out by the Veterinary Inspector, who is the Chief Meat Inspector, and by the Assistant Meat Inspector, Mr. Goodman.

A total number of 15,333 beasts, calves and pigs were slaughtered during 1919, of which 228 were tuberculous, or a percentage of 1.48.

Of the above-named 228 tuberculous carcases, 92, or 40.35 per cent., were totally rejected; 134, or 58.7 per cent., were cows, and 68 of these, or 50.7 per cent., were rejected.

39 of the 228 tuberculous animals were affected with Tuberculosis of the Lungs only.

In Table XXI. it will be seen that of 2,879 cows slaughtered at the Abbatoir, 6 had tuberculous udders, and 2 of these were supplying milk at the time of slaughter.

There are now 9 private slaughter-houses in Blackburn.

During 1919, 1,059 diseased carcases were examined at the Public Abbatoir, 289 of which were rejected and destroyed as unfit for human food.

TABLE XIX.
Number of Animals Slaughtered at the
Public Abattoir.

1919.	Beasts.	Sheep.	Calves.	Pigs.
January	535	516	401	246
February	276	518	612	342
March	308	691	782	425
April.....	439	156	771	334
May	539	271	271	176
June	349	897	241	144
July	516	2106	365	168
August	776	2826	189	169
September	590	3110	264	224
October	888	4150	301	325
November	1070	4203	404	416
December.....	957	1812	246	274
Totals.....	7243	21256	4847	3243

TABLE XX.

Number of Carcasses and Portions of Carcasses
Brought to the Abattoir.

1919.	CARCASES.			BEEF.			
	Beef.	Mutton.	Pork.	Hind Quarters.	Fore Quarters.	Bags.	Boxes.
January ...	73	1345	...	...	200	20	37
February	131	562	...	662	657	...	...
March.....	264	841	...	745	619	...	...
April	316	1184	...	696	735	...	...
May	96	1276	...	494	356	...	...
June	34	2688	...	497	513	...	...
July	1	637	...	98	69	...	...
August ...	37	1019	...	63	63	...	...
September	13 $\frac{1}{2}$	2395	...	301	342	...	...
October	48	838	...	133	133	...	12
November	34 $\frac{1}{2}$	...	...	...	...	...	...
December	143	1699	...	42	...	...	...
Totals	1191	14484	...	3731	3687	20	49

Table XXI.—Tuberculosis in the Animals Slaughtered during the twelve months ending 31st December, 1919.

Table XXII.—Tuberculous Carcasses Examined and Rejected.

		Cows.	Heifers.	Bulls	Bullocks.	Calves.	Sheep.	Pigs.	Totals.	Rejected
									Exam'd	Rejected
1916										
January	11	9	1	1	...	...	...	2	1	11
February	13	8	1	1	...	...	...	...	...	8
March	11	3	1	1	...	...	...	2	...	14
April	11	4	...	...	...	1	1	...	...	4
May	14	11	...	...	...	...	...	...	...	5
June	8	5	...	...	...	...	...	7	1	12
July	4	2	2	...	1	1	...	4	...	5
August	9	4	2	1	...	1	...	13	2	6
September	9	4	2	2	...	...	...	19	4	9
October	13	4	3	2	...	1	...	6	1	7
November	18	10	1	...	1	1	...	...	...	11
December	13	4	3	1	...	1	...	7	2	7
Totals.....	134	68	16	10	2	1	4	71	12	92

TABLE XXIII.

Diseased Carcasses Examined, Rejected and Destroyed
for Diseases, Etc., other than Tuberculosis.

BEEF.	MUTTON.	VEAL.	PORK.
8 Septicæmia	9 Dropsical	12 Immature	3 Asphyxia
3 Metritis	12 Emaciation	1 Navel-Ill	1 Septicæmia
4 Emaciation	4 Asphyxia	16 Joint-Ill	1 Ascites
5 Congested & ill Bled	2 Unmarketable	2 Scour	3 Pneumonia
3 Peritonitis	1 Nephritis	25 Jaundice	1 Emaciation
6 Dropsical	3 Congested and Ill Bled	27 Unmarketable 2 Pyrexia 8 Congested and Ill Bled 1 Enteritis 2 Nephritis 7 Asphyxia 23 Dropsical 2 Emaciation 2 Septicoæmia	
Totals	29	31	130
			9

DISEASED ORGANS, &c., REJECTED AND DESTROYED.

1919		Heads.	Sets of Lungs.	Hearts.	Diaphragms.	Livers.	Stomachs	Spleens	Kidneys	Udders.	Intestines	Testicles.	Bones.
For Tuberculosis ...		171	226	51	110	136	101	60	82	6	50	1	5
For Diseases other than Tuberculosis		160	173	14	26	770	2	1	53	8	5	..	..
Totals		331	399	65	136	906	103	61	135	14	55	1	5

FISH EXAMINED, REJECTED AND DESTROYED.

1919		Boxes	Barrels	lbs of Fish	Bags of Cockles
Totals		418	7	200	4

RABBITS, POULTRY, TINNED FOODS, FRUIT, ETC., EXAMINED, REJECTED AND DESTROYED.

Rabbits	Tuberculous Fowl	Other Fowl	lbs. of Pears	lbs. of Tomatoes	lbs. of Raspberries	Boxes of Dates	Boxes of Prunes
628	10	5	1240	736	140	451	8

7 tons Potatoes.

2 waggons Carrots.

180 Eggs.

158 lb. Butter.

NUMBER OF ANIMALS INSPECTED IN PRIVATE SLAUGHTER-HOUSES.

Beasts.	Sheep.	Calves.	Pigs.
Nil.	Nil.	Nil.	Nil.

NUMBER OF VISITS PAID BY MEAT INSPECTORS, 1919.

Butchers' Shops, etc.	2,687
Private Slaughter-houses	341
Meat Market	239
Fish Market	240
Railway Station	188
 Total	 3,695

REPORT OF THE VETERINARY INSPECTOR UNDER THE DISEASES OF ANIMALS ACTS AND ORDERS FOR THE YEAR 1919.

With the exception of Parasitic Mange in horses, the Borough has been free from the scheduled diseases throughout the year.

There were a number of sporadic outbreaks of Foot and Mouth Disease in England, but in all cases remote from Blackburn, so that we were not adversely affected by any orders prohibiting movement of cattle.

Rabies in dogs, which was eradicated from the United Kingdom in 1902, and which re-appeared in 1918, continued to show itself, principally in Wales and the South of England, throughout the year.

The Tuberculosis Order of 1914, which was suspended in August, 1914, still remained in suspension throughout the year.

ANTHRAX.

No cases of this disease occurred during the year.

There has been a notable diminution in the number of cases of this disease occurring in the United Kingdom during the restricted importation of feeding-stuffs from abroad.

The following figures show the cases of Anthrax discovered and reported in Blackburn during the last 10 years:

Years.	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919
Blackburn Cases	0	1	0	0	1	0	0	0	0	0
Outside Cases (Introduced)	2	1	1	2	0	1	0	1	1	0
Totals.....	2	2	1	2	1	1	0	1	1	0

GLANDERS AND FARCY.

No cases of this disease occurred.

SHEEP SCAB.

The approximate number of fat sheep brought into Blackburn during the year was 21,256.

No case of Sheep Scab was reported or detected.

FOOT AND MOUTH DISEASE.

No cases occurred in the Borough.

SWINE FEVER.

No outbreaks occurred in the Borough. One report was investigated but proved negative.

PARASITIC MANGE.

There were 24 reports of outbreaks involving 25 animals, and 23 involving 24 animals were positive; 13 were reported by the owner or his veterinary officer; 4 reported by the Police; 3 by the Inspector of the R.S.P.C.A.; and 4 were discovered by me.

16 of the animals recovered with treatment; 6 were destroyed; 1 died from other causes during treatment; and 1 case, which came from an outside district, was allowed to return under license from me.

There were 5 prosecutions under the Order, and fines were inflicted as follows:—£5 and costs; 20/- and costs; £5 and costs and £10 and costs; 40/- and costs; 40/- and costs.

RABIES.

One case of suspected Rabies in a dog was investigated by me and found to be negative.

As speedy diagnosis is a vital necessity where persons have been bitten, it cannot be too widely known that the quickest diagnosis is made from the living animal, so that the common practice of killing a dog which is suspected of Rabies before the Veterinary Officer has seen it, is to be condemned.

CATTLE MARKET.

The Cattle Market has been regularly cleansed and disinfected in accordance with the provisions of the Markets and Sales Order of 1910, after each of the two markets held weekly.

Approximate number of animals exhibited for sale in the Cattle and Pig Markets :—

Year.	Cattle.	Horses.	Sheep.	Calves.	Pigs.
1919.	8,325	269	17,223	2,188	163

The figures for the 10 preceding years are :—

Year.	Cattle.	Horses.	Sheep.	Pigs.	Calves.
1918	6,424	...	126	23043	...
1917	5,599	...	40	503	...
1916	4,045	...	2	126	...
1915	5,939	...	2	126	...
1914	6,314	...	29	420	...
1913	6,174	...	97	358	...
1912	4,724	...	191	399	...
1911	7,476	...	191	893	...
1910	7,697	...	151	544	...
1909	7,550	...	150	1851	...

E. J. BURNDRED, M.C., M.R.C.V.S., D.V.H.,

Veterinary Inspector.

Section VI.

GENERAL SANITARY WORK.

HOUSE DRAINAGE.

During the year, 262 drains were inspected, necessitating 215 applications of the smoke test and 261 of the water test.

In 153 instances drains were found defective at these inspections, and there were also 11 defective drains remaining over from last year's inspections to be dealt with.

The 11 defective drains referred to above have all been relaid and are satisfactory.

In 131 instances the defects in the drains have been remedied, and thus in 22 cases the work for remedying the defective drainage had not been completed at the end of the year.

During the inspection of and testing the drains, 1,453 visits were made.

The following statement shows in detail the drainage work which has been carried out during the year 1919:—

No. of drains inspected	262
,, , tested on account of Typhoid Fever ...	3
,, , tested on account of Diphtheria	30
,, , tested owing to complaints	122
,, , tested at the request of owners or new tenants	71

No. of drains tested owing to other causes	38
,, letters from the Medical Officer	59
,, Preliminary Notices served	36
,, Legal Notices served	5
,, cases of which work was carried out by verbal arrangement	53
,, visits to work in progress	1453
,, drains tested—	
(a) smoke	215
(b) water	261
,, drains examined by breaking down	135
,, ,, tested for leakages with coloured solutions	156
,, ,, found defective	153
,, ,, found not defective	109
,, ,, relaid throughout and stood the water test	91
,, ,, partly relaid and stood the water test (short lengths)	3
,, ,, partly relaid and stood the smoke test (short lengths)	37
,, instances of defective drains not relaid at the end of December, 1919	22
,, drains opened and cleansed, not relaid	21
,, gullies replaced	109
,, new lip dish-stones provided	119
,, inspection chambers provided	15
,, slop-water closet drains opened and cleansed	20
,, downspouts repaired	53
,, soil-pipes replaced or repaired	19
,, surfaces of yards flagged after drains relaid	12
,, surfaces of yards repaired after drains relaid	75
,, pail-closets converted to W.C.'s	4
,, sink waste-water pipes repaired	48
,, useless drains removed from cellar premises	2
,, slop-water closets converted to pedestal wash-down closets	7
,, privies converted to pedestal wash-down closets	0

No. of flushing apparatus repaired and new cisterns provided	29
,, new wash-down pedestals provided	31
,, general repairs (doors, etc.)	9
,, choked drains found	72
,, choked drains remedied up to the end of Dec., 1919	60

TYPE OF SANITARY CONVENIENCES.

There can be no doubt that any form of sanitary convenience other than the fresh-water closet is extremely objectionable in a large town, and the question of the general adoption of the water-carriage system throughout the Borough has been under the consideration of the Health Committee.

26 pail closets and 8 slop-water closets have been converted to fresh-water closets during the year.

The number of the various types of sanitary conveniences in the Borough at the end of 1919 was, approximately, as follows :—

No. of Privy Middens (fixed receptacles) ...	128
,, Pail and Tub Closets	9622
,, Slop-water Closets	2719
,, Fresh-water Closets	22755

SCAVENGING.

In my previous reports stress has been laid on the importance of a frequent and regular removal from the neighbourhood of dwellings of all forms of refuse.

The chief sources of danger are the large insanitary ashpit and the unsatisfactory ashtub. On account of the large size of the ashpit the tendency is to remove the contents at somewhat infrequent intervals, and its structure is such

that the walls become impregnated with organic matter and are difficult to cleanse. The removal of the contents generally involves its being tipped on the back road or elsewhere previous to being placed in the scavenging cart.

The large ashtub is almost as objectionable, as the wood-work becomes saturated with filth and, on account of the weight of these large tubs, it is necessary, as in the case of the ashpit, to deposit the contents on the road or pathway before being placed in the scavenging cart.

The following statement represents the work carried out in this branch of sanitation during 1919 by the Cleansing Department :—

Excreta	Tubs Emptied	521345
Excreta	Tubs Cleansed	269289
Ashes	Tubs Emptied	311374
Dry Ashpits	Emptied	146132
Wet Ashpits	Emptied	210

During the year 8,326 loads of Dry Ashes Refuse, and 31 loads of Midden Refuse were tipped.

Summary of Refuse destroyed at Destructors during 1919 :—

AUDLEY DESTRUCTOR—

	Tons.	Cwts.	Qrs.
Dry Ashes Refuse	6833	3	3
Midden Refuse	53	9	0
Fish and Market Refuse	1298	17	2
	—	—	—
Total	8185	10	1

GREENBANK DESTRUCTOR—

	Tons.	Cwts.	Qrs.
Dry Ashes Refuse	3052	6	0
Total	—	—	—

WENSLEY FOLD DESTRUCTOR—

	Tons.	Cwts.	Qrs.
Dry Ashes Refuse	115	18	11 3
Midden Refuse	2	2	0
Fish and Market Refuse	86	1	1
	—	—	—
Total	116	6	15 0

STORE YARD DESTRUCTOR—

	Tons.	Cwts.	Qrs.
Dry Ashes Refuse	18	25	14 0
Total	—	—	—

HOUSING AND TOWN PLANNING ACT, 1909.

On the return of the full staff of Inspectors, the work of systematic inspection has been recommenced.

A general survey of the town has been made with a view of classifying the Working Class Houses to meet the requirements of the Ministry of Health.

2,090 visits have been paid and the property scheduled under the following heads:—

- 1.—Unfit for habitation and cannot be made fit.
- 2.—Uninhabited and cannot be made fit, and obstructing light and ventilation to other dwellings.
- 3.—Seriously defective and can be made fit for habitation.
- 4.—Areas for reconstruction.
- 5.—Tenement Dwellings.

Details have been recorded of 158 houses, namely, 56 new inspections and 102 subsequent.

A full report with plans of 1, 3, 4, and 5 is being got out by the Chief Inspector and his assistants, and is well in progress, and the property is being visited by the Special Housing Committee.

INHABITED VANS.

The number of these dwellings visiting the Borough has been considerably less than in previous years. Twenty inspections have been made and constant supervision kept over them while in the Borough.

The general cleanliness of the vans and their surroundings has been well maintained.

HOUSES LET IN LODGINGS.

There are 50 of these tenements on the register, containing 217 rooms and providing living and sleeping accommodation for 490 adults and 81 children.

They have been kept under regular inspection, 2,707 visits having been paid during the year.

The Bye-laws have been fairly well complied with.

COMMON LODGING-HOUSES.

There are 21 houses on the register, accommodating 934 adults and 5 children.

These houses have been visited frequently and regularly, 820 visits having been paid to them during the year. They have been found clean and in good order. Less than half the accommodation has been required during the year.

The following is a list of the Common Lodging-Houses in the Borough at the present time :—

<i>Situation of Premises.</i>	<i>No. of Rooms.</i>	<i>Accommodation.</i>
19 Larkhill Street.....	41	314 adults
3 Syke Street	8	66 "
8 Mount Pleasant	8	65 "
7 and 9 Daisy Street	2	37 "
56 Chapel Street	6	36 "
74 Chapel Street	5	36 "
13 Birley Street	5	25 "
59 Water Street	5	25 " and 2 children
33 Joiners Row.....	6	33 "
83 Moor Street	5	21 "
13 Grimshaw Park	3	18 "
26 Bradshaw Street.....	3	18 " " 2 children
33 Larkhill Street	3	16 "
8 Cowell Street.....	2	20 " " 1 child
47 Nab Lane.....	2	8 "
49 " "	2	12 "
15 Bent Street	3	25 "
11 Grimshaw Park	5	21 "
31 King Street	6	37 "
66 Moor Street	19	92 "
70 " "	4	14 "

CANAL BOATS ACTS, 1884 & 1887.

In compliance with these Acts and with the Regulations of the Local Government Board, the Canal has been visited, and 54 boats have been inspected during the year.

Three infringements of the Acts were detected, namely—

Two masters without certificates.

One boat in a dirty condition.

Two notices have been served notifying the owners of the infringements, and the matters rectified.

No case of infectious disease has been met with, and there has been no detention of boats for cleansing or disinfection.

Two boats have been re-registered through change of ownership.

There are 64 boats, which are in use or available, on the register. Seventeen boats on the register have not been seen here for some time and cannot be traced.

In the 54 boats there were met with 101 males, 10 females, and 2 children. One child was under school age, and the other on a holiday trip.

OFFENSIVE TRADES.

There are 14 establishments in the Borough in which offensive trades are carried on :—

Tripe-boiling	6
Fat-melting	4
Gut-scraping	2
Horseslaughtering, &c.	2
	—
	14

Visits of inspection have been paid to these premises.

NUISANCES.

280 formal complaints have been received from the public during the year, as compared with 161 the previous year, and 370 visits were paid for the purpose of investigating the same. Necessary steps were taken for the abatement of the nuisances.

Table XXIV.

Description of Notices Issued and Nuisances Remedied.

Preliminary Notices served	1396
Legal "	572
Letters from M.O.H.	51
Nuisances remedied from—	
Defective Drains	51
Choked "	392
Defective Water Closets	84
" Pail "	111
" Slop Water Closets	17
" Trapped Gullies.....	272
" Sink Waste Pipes	64
" W.C. Cisterns and Flushing Fittings	395
" Easing Troughs and Down Spouts.....	57
" Gully Dishstones	272
Unflagged Yards	1
" Cellars.....	...
Yards badly paved or flagged	9
Houses overcrowded	2
Houses in filthy state	80
Yards, Closets, and Cellar Areas in a filthy state	597
Damp and defective house walls, roofs, etc.	292
Defective Window Frames, Sash Cords, etc.	11
Insufficient Ventilation of Rooms	14
Defective Manure Middensteads	33
Accumulations of Manure	3199
" Offensive Matter	483
" Stagnant Water	1
Dwelling-houses requiring lime-washing	150
Poultry and Erections in yards..	20
Low Chimneys Repaired	54
Defect in or absence of Ash Receptacles	228
Street Gullies and accumulation of Ashpit Refuse	798

Table XXV.

Summary of Visits paid by Sanitary Inspectors.

Common Lodging Houses	820
Houses Let in Lodgings	2707
Common Yards, Back Roads and Passages	15152
Infected Houses	284
Work in Progress	1057
Inspection of Dwelling-houses	2960
Horse-Manure Middens	3281
Cowsheds and Dairies	4
Miscellaneous	688
Investigation of Nuisances	370
Chip-Potato Shops	1416
Fishmongers and Greengrocers	1674
Inspection of Ashes Pits, &c.	1054
Inspection of Piggeries	5
Survey of Houses	2090

SMOKE OBSERVATIONS.

85 observations of one hour's duration were made of the various chimneys in the Borough. In 15 instances the time limit for black smoke fixed by the Town Council was exceeded, and notices served on the occupier.

8 firms provided new and improved appliances on the boilers and furnaces.

Section VII.

METEOROLOGICAL OBSERVATIONS.

Mean monthly reading of the Barometer—29.874"

Highest daily reading of the Barometer—30.676"

on April 1st.

Lowest daily reading of the Barometer—28.668"

on January 10th.

Highest reading of the Maximum Thermometer—78.5°

on August 16th.

Lowest reading of the Minimum Thermometer—19°

on February 9th.

Total rainfall during the year—39.94 inches.

Number of days during the year on which rain fell—222.

The greatest number of days on which rain fell in one month
—29, in December.

The highest reading of the 4ft. Thermometer during the
year—55.5, August 23rd.

The greatest amount of bright sunshine in one month—
188 hours, 5 minutes, in May.

The least amount of bright sunshine in one month—
18 hours, 20 minutes, in December.

Number of days during the year without any bright sun-
shine—95.

SUMMARY OF WIND RECORDS.

For the Year 1919.

Number of days during the year on which the prevailing wind was—

N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
27	8	102	5	78	15	97	33

The total number of miles registered by Anemometer during the year was—88,564.

The greatest number of miles registered during one day was—740, on January 2nd.

The least number of miles registered during one day was—31, on July 26th.

Table XXXVI.—Meteorological Report for the Year 1919.

1919	Mean Pressure Station Level. Sea Level. inches	Mean Relative Humidity. % inches		Mean of Maximum and Minimum Temperature. at 9 a.m. Readings		Mean of Black Bulb in Vacuum.		Under-ground Temperature. at 1 ft. at 4 ft		Absolute extremes of Temperature. Highest. Date. deg. deg.		Mean daily mini- mum on the grass below minimum on grass in shade.		Total bright sunshine.		Most sunshine in one day.		Direction of the Wind.		Mean daily move- ment of wind.		Total rainfall. Inches.						
		Sea Level. inches	Mean Relative Humidity. % inches	Highest. Date. deg. deg.	Lowest. Date. deg. deg.	Mean at 1 ft.	Mean at 4 ft	Highest. Date. deg. deg.	Lowest. Date. deg. deg.	Mean at 1 ft.	Mean at 4 ft	Am'nt. hrs. min.	Date	Am'nt. hrs. min.	Date	N.W.	S.W.	S.E.	E.	N.E.	W.	Miles.						
January ...	29.695	92.6	35.518	35.77	37.1	41.35	38.1	48	16th	21	28th	19.9	11.73	22—30	4—5	19th	2	1	9	4	9	2	1	3	328	4.62		
February	29.746	85.8	34.485	34.43	34.5	38.57	46.2	48	23rd	19	9th	18.9	12.05	44—10	6—30	13th	0	2	18	0	6	0	0	2	222	.88		
March ...	29.799	59.8	36.07	36.25	38.4	61.46	51	3rd	25	29th	18.9	12.45	77—5	9—55	30th	1	10	0	7	1	3	8	286	5.58				
April	29.898	83.55	42.485	42.28	41.87	39.87	87.9	57	12th	27	28th	24.6	12.44	102—45	11—0	21st	5	0	4	0	7	1	8	5	251	3.045		
May	29.984	83.0	53.5	53.2	50.5	44.9	11.111	75	6th	33	15th	31.9	13.4	188—5	13—15	15th	1	0	12	1	10	0	4	3	211	1.91		
June	29.520	30.029	77.5	55.155	54.22	55.2	50.6	120.1	78	13th	40	3rd	35.2	12.91	169—45	13—0	10th	2	0	5	0	4	0	18	1	252	1.84	
July	29.465	29.974	84.9	54.8	54.2	56.3	52.2	115.7	69	27th	43	13th	45.7	4.3	140—5	12—20	22nd	1	1	3	0	4	1	11	2	162	1.795	
August ...	29.414	29.915	88.67	57.25	55.9	45.2	53.08	125.8	78	16th	40	28th	47.8	3.9	135—5	12—31	31st	5	0	8	0	4	1	11	2	529	4.39	
September	29.396	29.910	89.38	52.86	52.15	53.87	53.93	103.2	78	12th	32	28th	41.2	6.5	124—30	10	30	11th	2	0	6	0	110	5	6	0	271.4	2.66
October ...	29.573	30.112	88.8	45.3	44.7	46.7	49.9	87.8	63	6th	40	29th	35.1	4.4	113—55	7—55	9th	6	0	7	0	111	0	111	0	216.2	2.45	
November	29.213	29.769	92.5	36.52	36.36	39.98	45.0	64.9	54	24th	21	15th	29.0	4.4	29—35	5—30	14th	1	2	16	0	1	0	9	1	225	2.97	
December	29.106	29.656	61.3	39.85	40.2	39.4	42.0	55.5	50.5	4th	27	26th	32.6	4.1	18—20	5—0	8th	1	1	4	0	10	2	9	4	274	7.71	

APPENDIX.

LOCAL GOVERNMENT BOARD TABLES.

TABLE I.—Vital Statistics of Whole District during 1919 and Previous Years.

Name of District: BLACKBURN.

YEAR.	Population estimated to Middle of each Year.	BIRTHS.		TOTAL DEATHS REGISTERED IN THE DISTRICT.		TRANSFERABLE DEATHS. [‡]		NETT DEATHS BELONGING TO THE DISTRICT.		At all Ages.	
		Uncorrected Number.	Nett.	Number. †	Rate. 5	Number. †	Rate. 7	Number. †	Rate. 9	Number. †	Rate per 1,000 Nett Births. II
1912	133539	2741	2737	20·4	1988	14·8	118	58	327	119·4	1928
1913	133931	2923	2915	21·7	2205	16·4	147	61	431	147·8	2119
1914	134323	2814	2805	20·8	2080	15·4	141	67	326	116·2	2006
1915	127443	2456	2452	19·2	2184	17·2	164	42	357	145·6	2062
1916	121066	2067	2065	15·6	1875	15·4	154	58	250	121·0	1779
1917	113315	1627	1626	12·8	1829	16·1	148	86	180	110·7	1767
1918	111447	1551	1552	12·4	2265	20·3	178	88	194	125·0	2175
1919	125992	1835	1838	14·0	2106	16·7	161	63	174	94·6	2008
											15·9

TABLE II.

Cases of Infectious Disease notified during the Year 1919.

NOTIFIABLE DISEASE.	Cases notified in whole District.							Total Cases notified in each Locality.							Total Cases removed to Hospital.						
	At all Ages	Under 1	1 to 5	5 to 15	15 to 25	25 to 45	45 to 65	65 and upwards	St. Stephen's	St. Michael's	St. John's	St. Silas'	St. Paul's	St. Peter's	St. Mary's	St. Matthews	St. Thomas'	St. Luke's	St. Mark's	St. Andrew's	
Small-pox .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cholera .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Diphtheria (including Membranous Croup)	30	1	11	14	1	2	1	...	...	...	...	...	...	...	...	...	...	...	...	...
Erysipelas	38	...	...	5	8	13	4	...	...	...	...	...	...	...	...	...	...	...	...	...
Scarlet Fever.....	136	...	26	105	4	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Typhus Fever .....	...	...	...	1	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...
Enteric Fever	3	...	1	1	1	1	4	...	...	...	...	...	...	...	...	...	...	...	...	...
Puerperal Fever	5	...	...	...	1	1	1	...	...	...	1	...	...	...	...	...	...	...	...	...
Cerebro-spinal Meningitis	2	...	...	...	1	1	1	...	...	...	1	...	...	...	...	...	...	...	...	...
Ophthalmia Neonatorum	18	18	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Pulmonary Tuberculosis.....	124	...	2	30	34	43	14	1	...	10	5	10	12	3	13	7	5	11	12	6	
Other forms of Tuberculosis.....	47	...	3	28	10	4	2	...	5	3	3	1	4	1	3	5	6	2	5	3	
Measles—Notified by Doctor	39	1	15	21	1	1	9	2	2	3	16	14	3	3	9	7	2	13	5
" other persons	64	1	5	57	1	...	...	...	...	...	1	1	1	1	1	1	...	...	...	...
Encephalitis Lethargica	5	...	...	2	2	1	...	...	...	...	1	1	1	1	1	1	...	...	...	...
Dysentery	3	...	...	...	1	2	...	...	3	7	6	..	3	5	3	5	2	1	6	1
Malaria	61	...	...	...	15	41	5	...	5	2	14	6	10	9	5	6	11	9	3	8
Pneumonia	114	...	17	10	28	38	17	4	5	2	14	6	10	9	5	6	11	9	3	8	
TOTALS	689	21	80	273	107	147	52	9	52	9	52	41	35	50	62	28	30	70	62	53	78

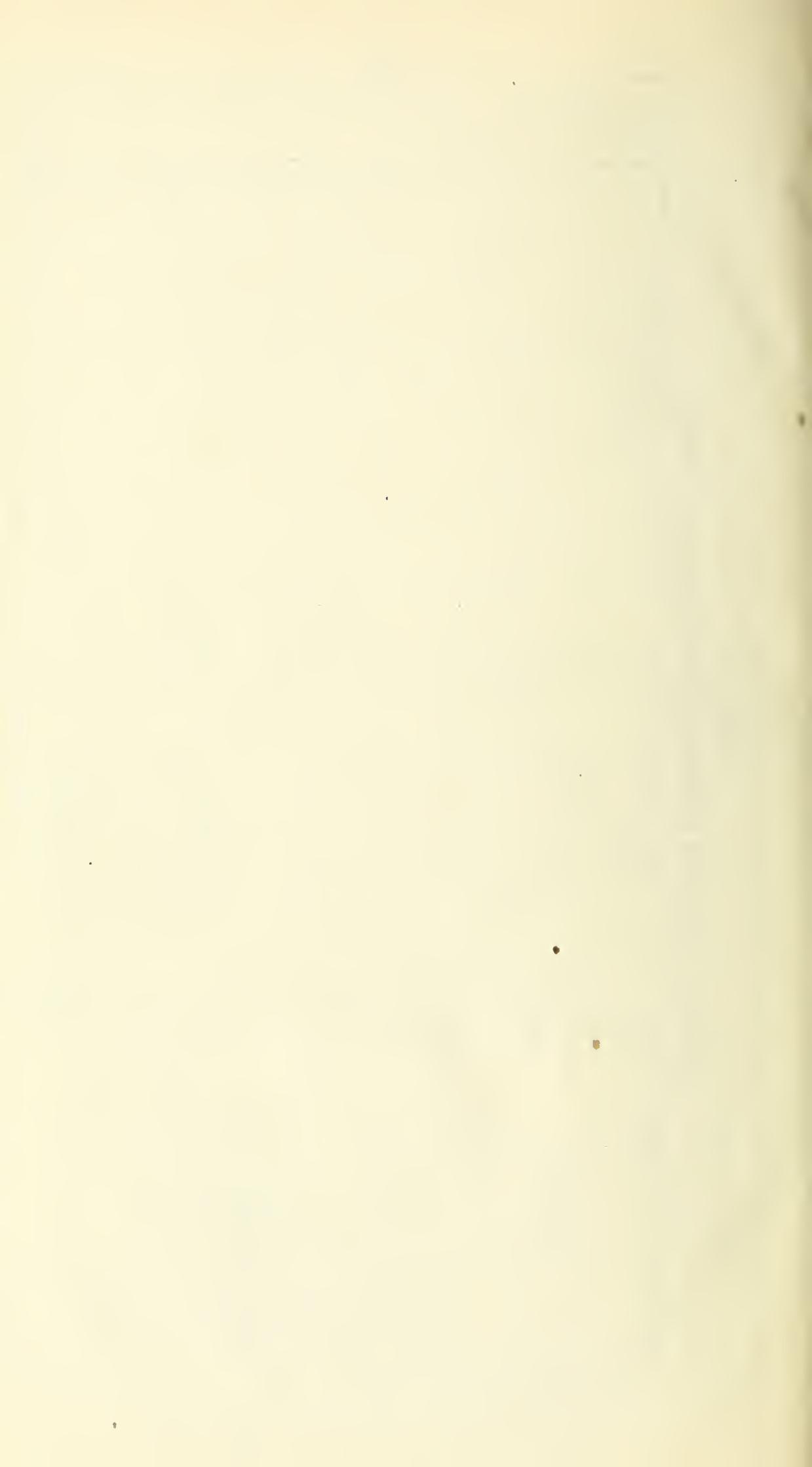


TABLE III.—Deaths registered during the Calendar Year 1919 classified by age and cause.

Name of District: BLACKBURN.

(See Notes at Back.)

CAUSES OF DEATH.		Nett Deaths at the subjoined ages of "Residents," whether occurring within or without the District (a).								Total Deaths whether of "Residents" or "non-Residents" in the District (b).	
		All Ages.	Under 1 year	1 and under 2 years.	2 and under 5 years.	5 and under 15 years.	15 and under 25 years.	25 and under 45 years.	45 and under 65 years.	65 and upwards.	
I	2	3	4	5	6	7	8	9	10		
All causes	{ Certified (c)	... 2000	169	53	72	76	110	276	575	669	...
	Uncertified	... ...	8	5	...	...	...	...	...	3	...
Enteric Fever	...	...	1	...	...	1	...	...	...	...	1
Small Pox	...	...	...	...	...	...	...	...	...	...	...
Measles	...	...	...	...	...	...	...	...	...	...	...
Scarlet Fever	...	...	2	...	...	1	1	...	...	...	2
Whooping Cough	...	...	11	1	3	7	...	...	...	...	...
Diphtheria and Croup	...	3	...	...	1	2	...	...	...	...	1

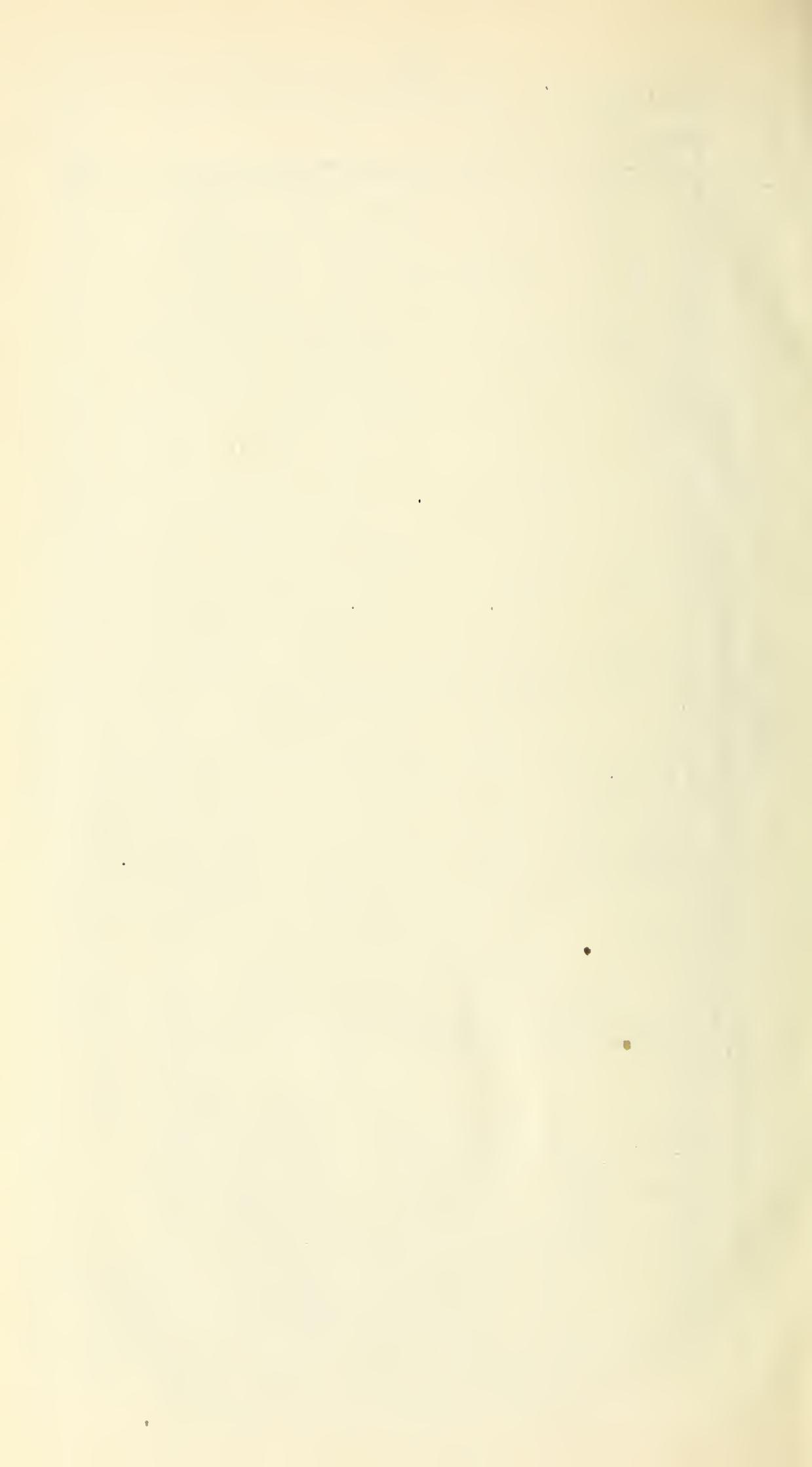


TABLE III.—Deaths registered during the Calendar Year 1919 classified by age and cause.
Name of District : BLACKBURN.
(See Notes at Back.)

CAUSES OF DEATH.		Nett Deaths at the subjoined ages of "Residents," whether occurring within or without the District (<i>a</i>).									
All Ages.	Under 1 year	1 and under 2 years.	2 and under 5 years.	5 and under 15 years.	15 and under 25 years.	25 and under 45 years.	45 and under 65 years.	65 and upwards.			
1	2	3	4	5	6	7	8	9	10		
All causes	(Certified (<i>c</i>) ...	2000	169	53	72	76	110	276	575	669	...
All causes	{Uncertified ...	8	5	...	...	...	...	...	...	3	...
Enteric Fever	...	1	...	1	...	...	...	...	...	1	...
Small Pox	...	...	...	...	...	...	...	...	...	...	...
Measles	...	...	...	...	...	...	...	...	...	...	...
Scarlet Fever	...	2	...	1	1	1	1	...	...	2	...
Whooping Cough	...	11	1	3	7	...	...	...	...	...	...
Diphtheria and Croup	...	3	...	1	2	...	...	...	...	1	...
Influenza	...	187	3	2	16	5	24	67	42	28	20
Erysipelas	...	1	...	...	...	...	...	...	1	...	...
Phthisis (Pulmonary Tuberculosis)	116	...	3	...	8	33	42	24	6	32	...
Tuberculous Meningitis	10	2	3	...	3	2	...	...	...	2	...
Other Tuberculous Diseases	17	1	4	3	1	7	...	...	1	5	32
Cancer, malignant disease	165	...	...	...	2	2	23	78	60	...	...
Rheumatic Fever	...	2	...	...	...	...	...	2	...	1	...
Meningitis (See note <i>d</i>)	...	5	...	2	1	...	1	1	...	1	...
Organic Heart Disease	...	269	...	...	3	9	21	99	137	56	...
Bronchitis	...	269	21	7	3	5	1	13	100	119	50
Pneumonia (all forms)	...	210	20	17	20	11	13	37	57	35	43
Other diseases of Respiratory organs	...	16	...	...	...	1	...	2	9	4	2
Diarrhoea and Enteritis. (See note <i>e</i>)	...	26	10	2	6	...	1	1	1	5	2
Appendicitis and Typhlitis	...	9	...	...	...	3	2	2	1	1	12
Cirrhosis of Liver	...	3	...	...	...	...	...	...	1	2	1
Alcoholism	...	...	...	...	...	...	...	...	...	...	...
Nephritis and Bright's Disease	51	...	...	...	3	...	4	4	25	19	10
Puerperal Fever	...	5	...	...	...	...	...	5	...	...	...
Other accidents and diseases of Pregnancy and Parturition	6	...	...	...	...	...	...	6	...	...	3
Congenital Debility and Malformation, including Premature Birth	...	84	84	1	...	...	...	...	...	...	3
Violent Deaths, excluding Suicide	40	...	...	7	5	2	4	8	13	22	...
Suicides	...	8	...	...	...	...	5	3	...	1	...
Other Defined Diseases	...	428	23	7	2	20	11.	37	103	225	201
Diseases ill-defined or unknown...	64	8	3	4	3	2	6	21	17	3	...
Totals	...	2008	174	53	72	76	110	276	575	672	505

NOTES TO TABLE III.

The classification and numbering of Causes of Death are those of the "Short List" on page XXV. of the Manual of the International List of Causes of Death, which should be consulted and followed in all cases of doubt.

Copies of this Manual were distributed to Medical Officers of Health in 1912 by the Registrar-General, and may be purchased either directly or through any bookseller from Wyman & Sons, Ltd., 29, Breans Buildings, Fetter Lane, E.C., price 1/-.

(a) All "Transferable Deaths" of residents, *i.e.*, of persons resident in the District who have died outside it, are to be *included* with the other deaths in columns 2-10. Transferable deaths of non-residents, *i.e.*, of persons resident elsewhere in England and Wales who died in the District, are in like manner to be *excluded* from these columns. For the precise meaning of the term "transferable deaths" *see* footnote to Table I.

The total deaths in column 2 of Table III. should equal the figures for the year in column 12 of Table I.

(b) All deaths occurring in institutions for the sick and infirm situated within the district, whether of residents or of non-residents, are to be entered in the last column of Table III.

(c) All deaths certified by registered Medical Practitioners and all Inquest cases are to be classed as "Certified"; all other deaths are to be regarded as "Uncertified."

(d) Exclusive of "Tuberculous Meningitis" (10), but inclusive of Cerebro-spinal Meningitis.

(e) Title 19 should be used for deaths from Diarrhoea and Enteritis at all ages. (In the "Short List", deaths from Diarrhoea and Enteritis under 2 years are included under Title 19; those at 2 years and over being placed under Title 28.)

N.B.—Deaths of soldiers and sailors occurring in hospitals and institutions in the district are to be excluded from the total number of deaths registered in the district, and such deaths should in like manner be excluded from column 11 of Table III.

TABLE IV.

Deaths under One Year, arranged according to Days, Weeks and Months.

CAUSES OF DEATH.	1st day.	2nd day.	3rd day.	4th day.	5th day.	6th day.	7th day.	1st week.	2nd Week.	3rd week.	4th week.	Under 1 month.	1 month to 2.	2 months to 3.	3 months to 4.	4 months to 5.	5 months to 6.	6 months to 7.	7 months to 8.	8 months to 9.	9 months to 10.	10 months to 11.	11 months to 12.	TOTAL.
	29	8	4	4	1	5	1	52	11	10	6	79	20	14	3	4	6	13	5	8	8	7	2	
All causes { Certified	29	8	4	4	1	5	1	52	11	10	6	79	20	14	3	4	6	13	5	8	8	7	2	169
Uncertified	5	...	...	...	...	...	...	5	...	...	...	5	...	...	...	...	...	...	...	...	...	...	...	5
Smallpox .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Chicken-pox .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Measles .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Scarlet Fever .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Whooping-cough .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Diphtheria and Croup .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Erysipelas .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Tuberculous Meningitis .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2
Abdominal Tuberculosis .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
Other Tuberculous Diseases .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Meningitis (not Tuberculous) .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Convulsions .....	...	...	...	...	...	...	...	...	1	...	1	2	2	1	...	...	1	1	...	...	1	1	...	9
Laryngitis .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Bronchitis .....	...	...	...	...	...	...	...	...	2	...	1	1	3	5	...	...	1	3	3	1	1	2	1	21
Pneumonia (all forms) .....	...	...	...	...	...	...	...	...	1	2	...	2	1	1	2	...	4	1	2	4	2	...	20	...
Diarrhoea .....	...	...	...	...	...	...	...	...	...	...	...	3	3	1	...	...	1	...	2	...	...	...	...	10
Enteritis .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Gastritis .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
Syphilis .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
Rickets .....	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	2
Suffocation, overlying .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
Injury at birth	1	...	...	...	...	...	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1
Atelectasis	3	...	...	...	...	...	...	3	...	...	...	3	...	...	...	...	...	...	...	...	...	...	...	3
Congenital Malformations	1	1	...	...	...	...	...	2	...	...	2	3	...	...	...	...	...	...	...	...	...	...	...	5
Premature birth	19	7	2	4	1	2	...	35	5	4	1	45	...	...	...	...	...	1	...	1	1	1	...	49
Atrophy, Debility and Marasmus	8	...	2	...	...	3	...	13	2	2	2	19	5	3	...	...	2	...	1	...	1	...	...	30
Other causes	2	...	...	...	...	...	...	1	3	...	2	1	6	1	2	...	1	2	2	1	...	1	...	17
TOTAL.....	34	8	4	4	1	5	1	57	11	10	6	84	20	14	3	4	6	13	5	8	8	7	2	174

Nett Births registered during the calendar year
 legitimate 1726
 illegitimate 112

Nett Deaths registered during the calendar year of
 legitimate infants 157
 illegitimate infants 17

